

## ***Demon est deus inversus: Literary Cartography in Melville's "The Encantadas"***

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*In March 1854, a printer's error prevented Herman Melville from publishing a self-made map that might have influenced public perceptions of Henry Thoreau's map of Walden Pond, which appeared just eight months later in the text of Walden. This article restores Melville's map—a reversed letter "E" representing the Galapagos Islands—to its original 1850s context, places it alongside Thoreau's most famous piece of literary cartography, and interprets a potent philosophical dialectic between the two images—both of which were produced by writers who were trained in civil engineering.*

*In "The Encantadas" Melville contested Transcendentalism and anticipated the modern linguistics of Ferdinand De Saussure by severing linkages between language and things, first by exposing the dark side of the universe—the enigmatic, anti-mythic Galapagos landscape, a place effectively beyond the tolerated vocabulary of his culture—then by representing this substitute Promised Land with a reversed signifier. Doing so implicitly argued for the universality of a signifier which was emphatically no signifier at all. Melville's post-modern world, utterly bereft of transcendence, therefore signals deep existential despair. His survey map is not an environment like the one imaged in Thoreau's Walden (a microcosm in which prevailing epistemology has been subversively re-imagined) but one in which meaning is nullified.*

*A second relationship explored in the article involves Melville and Nathaniel Hawthorne. Parallels between Melville's letter-map and Hawthorne's scarlet letter are multiple and striking.*

*With the Walden Map, Thoreau overturned a scientific signification; with the scarlet letter, Hawthorne overturned a literary or linguistic one. Melville in his letter-map, however, drew upon the power of both processes to interrogate signification in general.*

Published in November 1854, Henry David Thoreau's *Walden; or, Life in the Woods* describes a specific natural landscape in both rational-scientific and poetic-intuitive terms. Included in the text is a carefully-drawn survey map—a three-dimensional microcosm of the pond environment that served as an ocular demonstration of the author's intended fusion of natural history, physics and philosophy.

To create the single page of *Walden* on which the survey map appeared, Thoreau took a tripod-mounted surveying compass onto the frozen pond surface and recorded magnetic bearings, transcribing what nature dictated, making himself a conduit for data that registered on the face of the compass but emanated from the earth's magnetic field. Thoreau's coupling of linguistic and numeric signification systems—his first bearing was labeled “A” and his final one “Z”—was strangely appropriate, for in gathering data about Walden, he was also producing and inscribing the literary text of *Walden*. The illustration he created, which appeared opposite page 307 in the book's first edition, amounted to a merger of mathematic and linguistic symbols authored as much by the compass needle as by Thoreau.<sup>1</sup> Though there is evidence that the pond map was initially misunderstood—a friend of Ralph Waldo Emerson thought it was included for humorous reasons and called it “a capital satire and joke”<sup>2</sup>—it is now an important image in American history for its assertion of latent synergies between interlinked, cross-disciplinary forms of knowledge.

Moreover, Thoreau's pond survey rejected standard representational practices of map-making. The image was presented without the many property lines that had already divided up the Walden woods, without the Lincoln-Concord town boundary that bisects the pond, and without “declination data” (variation of the compass from true north), all of which make a survey map economically useful. Finally, the map is upside down, reversing the traditional compass rose that designates north at the top of a map. In *Nature*, Ralph Waldo Emerson directed us to see old landscapes new ways by proposing that we “turn the eyes upside down” by looking at the landscape through our legs. “How agreeable is the picture. . .!” Emerson mused.<sup>3</sup> Such willful reversals or modifications of standard perception are useful because, as Emerson warned, “Empirical science is apt to cloud the sight.”<sup>4</sup> Perhaps for this reason, on the most famous image Thoreau ever made, north is south and east is west—the world is reversed on its axis, a maneuver that declares the literary cartographer's desire to present his surroundings in terms that avoid simply reproducing prevailing epistemology.

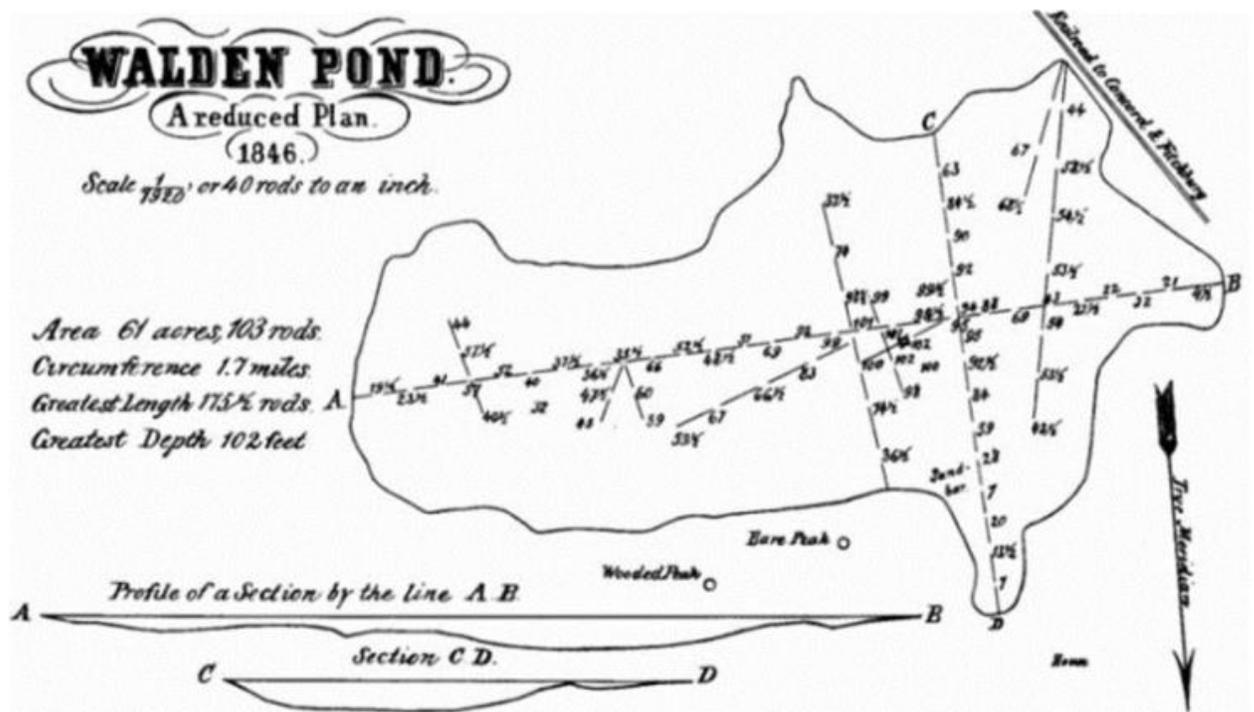


Figure 1

A comparison between Thoreau’s depiction of his Walden microcosm and another upside down cartographic image, Stuart McArthur’s 1979 “Universal Corrective Map of the World,” suggests how both images symbolize the aspiration to, as Nick Danforth puts it, “overturn . . . unjust political and economic relationships” through an altered perspective. The maps of both McArthur and Thoreau remind us that “There is nothing inevitable or intrinsically correct — not in geographic, cartographic or even philosophical terms — about the north being represented as up, because up on a map is a human construction, not a natural one.”<sup>5</sup> By including in his literary text a representation of physical reality at once highly subjective and “corrective,” Thoreau made an iconoclastic statement about how he perceived the world.

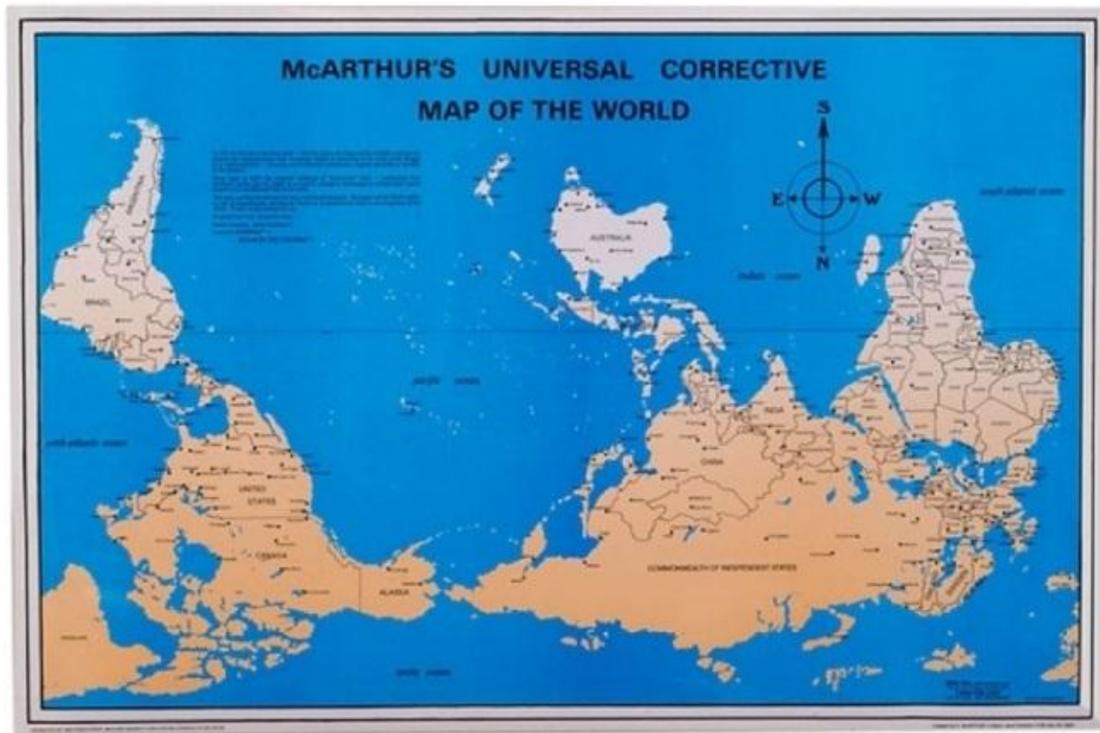


Figure 2

Herman Melville, however, almost beat him to it. Eight months before the publication of *Walden*, the first installment of Melville's "The Encantadas, or the Enchanted Isles" appeared in the March 1854 *Putnam's*. The fourth chapter or "sketch" of the manuscript Melville submitted to *Putnam's* used a deceptively simple "familiar diagram"—a backward capital letter "E"—as a form of cartographic shorthand for his representation of the Galapagos Islands. Like Thoreau's pond survey, Melville's diagram of the "strange neighborhood" of Narborough and Albemarle islands offered an idiosyncratic reading of a philosophically interesting location, an image seemingly deliberately formulated to reinforce the tone and argument of the text in which it appeared.

The fact that the two maps were produced simultaneously offers grounds enough for looking at them together. Readers of *Putnam's*, at least those who might also have seen a copy of *Walden* later in 1854, should have been able to compare the maps of Melville and Thoreau as hybrid literary documents that did crucial cultural work. But perhaps for some of the same reasons Thoreau's map was misunderstood, this never happened. Melville's unusual map was omitted entirely from his published text;

the *Putnam's* typographer neglected to insert the called-for reversed letter, mistakenly creating a two-line blank space where the map should have been and rendering unintelligible several paragraphs of Melville's landscape description:

**Narborough and Albemarle are neighbours after a quite curious fashion. A familiar diagram will illustrate this strange neighbourhood.**

**Cut a channel at the above letter joint, and the middle transverse limb is Narborough, and all the rest is Albemarle. Volcanic Narborough lies in the black jaws of Albemarle like a wolf's red tongue in his open mouth.**

Figure 3

It has taken a long time to get the image of Melville's letter-map correctly restored as a textual element. When "The Encantadas" was republished in *The Piazza Tales* in 1857, the typographer inserted a downturned "E" that impaired the map's directional orientation, failing to make its position correspond to the westward opening of the islands as called for in Melville's description. As a result, this incorrectly oriented "E" became standard in Melville reprints for more than a century:<sup>6</sup>



Figure 4

Not until the Northwestern-Newberry edition of Melville's works in 1987 did the map appear in proper directional perspective. The Newberry editors, concluding that Melville "cannot have intended" the letter to be turned downward, corrected the lapse by supplying a reversed, westward-opening E as "not just the 'Letter' but the 'diagram' called for by Melville's description and required to illustrate it".<sup>7</sup>



**Figure 5**

But I believe this figure is still not quite right. The spare, unadorned, modern-looking font used by the Newberry editors makes no attempt to reproduce the more ornate serif font that would have been used for the E as printed in *Putnam's* in 1854. This is important because Melville used a descriptive simile requiring that the contours of the figure denote certain values and meanings. Specifically, it needed to convey Darwinian nature's predatory ferocity by resembling concave wolf's jaws enclosing the smaller of the two islands: "Narborough lies in the black jaws of Albemarle like a wolf's red tongue in his open mouth."<sup>8</sup> The straight contours of the letter as it appears in the Northwestern Newberry Edition do not seem to justify Melville's language or adequately convey the enclosed position of Narborough. Whether the Darwinian trope would even have occurred to Melville if he had imagined the type of purely rectilinear figure used in the Newberry edition seems unlikely.

A little more restorative work therefore seems worthwhile to present an image that corresponds with Melville's descriptors and the probable appearance of the map were it not for the printer's mistake. A solution is to insert the image as it would have appeared if the *Putnam's* typesetter had used a font uniform with the rest of the story's text. Here, alongside a map of the Galapagos Islands that Melville probably consulted

while writing “The Encantadas,”<sup>9</sup> is an enlarged and reversed capital E lifted from the original 1854 text:



Figure 6

Better than previous attempts to incorporate the image, what this version conveys is both the proper directional orientation—“Albemarle opens his mouth towards the setting sun”—and a stronger sense of the figure as an oral cavity—“His distended jaws form a great bay, which Narborough, his tongue, divides into halves.”<sup>10</sup> As cartography, the letter-map is adequate, offering a fair representation of the shape of the islands, though its imprecision flaunts the imprecision of all maps as symbols. At least in terms of its directional orientation, this map also conforms to standard map-making practice; it is not the map that is reversed or overturned, but the “familiar diagram” substituted for it, a diagram which, it should be acknowledged, is recognizable but suddenly no longer familiar.

Obviously cognizant of standard cartographic representations of the islands, Melville decided on an alternate, subjective form of representation, giving up objectivity first by verbally attributing deeply disturbing emotional connotations to the Galapagos in his landscape description, then by signifying the islands with a substitute or hybrid map, an idiosyncratic “diagram” expressive of equally unnerving sentiments. While

Melville's literary text claims to have determined the relative position of the islands by distance and bearing—the same methods of cartographic surveying Thoreau used—his visual text expresses the character of the location metaphorically, through intuition. Scientific and imaginative idioms therefore cooperate to discern and display in *Albemarle* and its “neighbor” *Narborough* not only an omen of primeval terror but, in what is perhaps a bolder creative leap, a backward grapheme or reversed linguistic signifier.

Melville's choice of this particular form for his Galapagos map—the most common letter in the English language decontextualized and estranged, its accepted meaning negated and replaced with overtones of fear and ferocity—has profound implications. These begin with the awareness that the author's extended textual description of the Galapagos—a location Melville saw firsthand while serving on the whaler *Acushnet* in 1841—is arguably the most starkly pessimistic and theologically despairing prose passage he ever published. Melville's lapidary motto, “In no world but a fallen one could such lands exist,”<sup>11</sup> aptly sums up the sketch, hints at the map's symbolic value, and invites an understanding of the co-presented visual text in “The Encantadas” as the cartographic equivalent to its author's verbally expressed existential despair.

That Thoreau and Melville should incorporate maps and analyze them in their literary work is not surprising—both were trained as land surveyors. Thoreau taught himself surveying in the 1840s and worked as a professional in this capacity from 1849 to 1861, eventually completing over 165 paid jobs and earning a reputation as the best surveyor in Concord. Bronson Alcott's description of Thoreau as his town's “resident Surveyor-general” was accurate. In the Concord census of 1860, Henry Thoreau's occupation was listed as “Surveyor.”<sup>12</sup>

Melville never held a paying job as a civil engineer, but his formal training in the discipline was actually more extensive than Thoreau's. In November 1838, nineteen-year-old Melville began a fifteen-week course in land surveying and engineering at the Lansingburgh Academy near Troy, New York. After he successfully completed this course, the text for which was Charles Davies' widely-used *Elements of Surveying*—the same book Thoreau relied on to teach himself surveying—his uncle Peter Gansevoort wrote to New York Canal Commissioner William Bouck, asking Bouck to hire his nephew as a surveyor for the New York canal system and attesting that Herman was well-prepared “for the business of surveying & engineering.”<sup>13</sup>

Though Melville wasn't hired, it seems significant that surveying certification was the last piece of formal education acquired by the author of *Moby Dick*, and that surveying was described as the “business which he desire[d] to make his profession”<sup>14</sup>

less than two years before he embarked on his first whaling voyage. It's worthwhile to ask, for example, how the skills of landscape observation, measuring, drafting, mapping and direction-finding taught in Davies' *Elements of Surveying* had an impact on Melville's art.

In determining the import of both Melville's and Thoreau's knowledge about the science of landscape measurement, its place in nineteenth century culture should also be acknowledged. In this period both land surveyors and nautical surveyor-cartographers were playing crucial roles in processes of imperialistic Manifest Destiny and were central to three major cultural enterprises that opened access to both inland and ocean frontiers. First, the formal Survey of Public Lands, going on in the West as Thoreau and Melville matured as writers, measured and inscribed the grid-like townships that transformed land previously inhabited by Native Americans into the property of whites and brought "civilization" to vast unsettled areas. Second, the U.S. Coast Survey, a large-scale enterprise that advanced American science and commerce by making the first accurate maps of harbor depths and littoral contours from Maine to California, reached its peak of influence and notoriety under charismatic superintendent Alexander Dallas Bache. Finally, the U.S. Exploring Expedition captured the nation's imagination during its four-year voyage from 1838-1842, logging extraordinary achievements under the direction of naval lieutenant and expert surveyor Charles Wilkes, who mapped 280 Pacific islands and won international fame by finding definitive evidence of the long-speculated existence of Antarctica. Melville read Wilkes' chronicle of the Exploring Expedition while writing *Moby Dick*; Thoreau refers to the Wilkes Expedition in the final chapter of *Walden*.<sup>15</sup> As Samuel Clemens later recalled, "the name of Wilkes, the explorer, was in everybody's mouth" because he "had discovered a new world and was another Columbus."<sup>16</sup>

Of equal renown by the time Melville wrote "The Encantadas" was the British-led voyage of the *H.M.S Beagle*, which helped Charles Darwin crystallize his evolutionary theory and sent broad shock waves through intellectual culture with especially profound impact on traditional theology. When Melville visited the Galapagos in 1841, it had only six years earlier been carefully studied—its plant and animal life analyzed by Darwin and its topography surveyed by the crew of the *Beagle*. Melville's narrator in "The Encantadas," conversant with both processes, seems intent on synthesizing them creatively.

Doubtless another factor affording prominence to the natural sciences in general and measuring science in particular was the trend in literary-philosophical spheres toward placing high value on first gathering environmental facts and data, then investing them with meaning by discovering patterns and symmetries between the

physical world and the human soul. Essentially transcendentalists theorized that, just as Darwin discerned a broad teleology in biology, the disposition and evolution of geographic features, if studied with imagination and intuition, expressed both a purpose-driven design and analogies to human thought and action. If “the whole of nature” as Emerson theorized, was “a metaphor for the human mind,”<sup>17</sup> then landscape analysis was also self-analysis. In his role as a self-appointed “surveyor” and inveterate measurer of seemingly every accessible feature of every landscape he encountered, Thoreau is perhaps the best practical embodiment of this philosophy. By the early 1850s, Melville had read and appreciated Thoreau’s first book, *A Week on the Concord and Merrimack Rivers*, which declares, “What wonderful discoveries have been, and may still be, made, with a plumb-line, a level, a surveyor’s compass, a thermometer, and a barometer!”<sup>18</sup> Considering Melville’s own experiential and reading-based knowledge of surveying, navigation and scientific exploration, it would have been hard for him not to imbibe versions of the same philosophical concepts and at some point address them literarily.

Proof that Melville was conversant with Emerson-derived linkages between mathematics and poetry, physics and ethics, or measuring and morality is contained in an underappreciated passage from *Moby-Dick*. Ishmael’s careful examination of a whale skeleton in chapter 102, “A Bower is the Arsacides,” resembles the processes of environmental “inspection” Thoreau later described and endorsed in *Walden*, a similarity likely originating in the fact that both authors studied Davies’ surveying textbook alongside Emerson’s transcendentalist textbook, *Nature*. Confronted with a colossal whale skeleton made by natives into a habitable religious sanctuary in a “sea-side glen” on the island of Tranque, Melville’s Ishmael attempts to lay bare for examination “the subterranean parts of the whale. . . to dissect him in miniature. . . reading all the contents.”<sup>19</sup> If there is *telos* in geographical knowledge there is *telos* in anatomical knowledge, especially when the anatomical feature in effect becomes a landscape feature comprehensible through measuring process and lexicon. To sanction this analogy, Melville invokes the “Icy Glen,” a deep verdant rock crevice near his Berkshire home, comparing it to the romantic environs of the Tranquean whale skeleton, a “grim god” with “the skull an altar” and the ribs a labyrinth of “colonnades and arbors.”<sup>20</sup>

In the presence of such natural wonder, the question becomes how best to comprehend it. “Cutting me a green measuring-rod, I once more dived within the skeleton,” Ishmael explains as he measures and records a series of dimensions that concludes with “taking the altitude of the final rib.” The Tranquean priests apparently detect sacrilege and a sense that Ishmael is colonizing their demiurge: “How now!” they

shouted; ‘Dar’st thou measure this our god!’ That’s for us,’” to which Ishmael responds by prodding them to take their own data in feet and inches.<sup>21</sup> Surveying technology has traditionally been the domain of the white male, so it is not surprising that Ishmael immediately mocks the natives’ attempts to produce their own statistics by replicating his methods. While the bungling Tranqueans argue and “crack[ed] each other’s sconces with their yardsticks,” Ishmael records his measurements and confidently avers that “There are skeleton authorities you can refer to, to test my accuracy.”<sup>22</sup>

Thoreau had used his surveying field notebook—normally a space of purely economic purpose—both to copy down scientific data about tree succession and, occasionally, to document measurements that had nothing to do with paid surveying work and everything to do with moral philosophy. In October 1851, for example, he measured and recorded the vertical elevation “from the surface of Walden Pond to the top of the rail” of the Fitchburg Railroad tracks “at the western extremity of the pond,” ascertaining that “20 ft 6 ½ inches” described the exact distance from water to forged iron, from nature to technology.<sup>23</sup> In *Moby Dick*, Ishmael does something similar but with a telling variation, using his body itself as a notebook to permanently record philosophically charged data:

The skeleton dimensions I shall now proceed to set down are copied verbatim from my right arm, where I had them tattooed; as in my wild wanderings of that period, there was no other way of preserving such valuable statistics.<sup>24</sup>

Like Thoreau, who combined scientific and poetic observations in his field notes, Melville’s Ishmael unites facts and poetry in a single document, the blank space of his epidermis. After filling his right arm with mathematics, he states: “I . . . wished the other parts of my body to remain a blank page for a poem I was then composing.”<sup>25</sup>

Emerson’s *Nature* had asserted that “every natural fact is a symbol of some spiritual fact” and that “every natural process is a version of a moral sentence.”<sup>26</sup> But it is one thing to internalize this truth as Thoreau did, effacing a purely economic space by infusing his commercially-purposed *Field Notes of Surveys* with facts of philosophic import—and quite another, more radical thing to do as Ishmael does, literally incorporating the philosophical data by merging bodily with it, making of one’s flesh a locus for permanent data-storage. Melville’s first novel *Typee* attests that the subsuming of individuality and identity through the Pacific island cultural practice of tattooing could produce enormous psychic shock for white Americans and Europeans. Ishmael’s decision to have himself tattooed with the dimensions of the Tranquean god therefore constitutes a “going native” in totality, but in a manner that bespeaks allegiance to

Emersonian thinking about the need to merge facts with poetry and reason with intuition, thereby investing hard science with spirit and soul.

If “idealism,” as Emerson wrote, “is a hypothesis to account for nature by other principles than carpentry or chemistry,”<sup>27</sup> then Ishmael’s preservation of part of his flesh for poetry after giving over part of it to mathematics epitomizes such called-for cross-disciplinary cooperation. Attempting to imaginatively comprehend the whale in an earlier chapter, Ishmael had asked, “Would it be unreasonable to survey and map out the whale’s spine phrenologically?”<sup>28</sup> Walt Whitman, responding to like principles in the preface to his 1855 edition of *Leaves of Grass*, asserted that “exact science” is the “encouragement and support” of the poet, that “the anatomist chemist astronomer geologist phrenologist spiritualist mathematician historian and lexicographer. . . are the lawgivers of poets and their construction underlies the structure of every perfect poem.”<sup>29</sup>

Among the laws given to the poet by science, the “rule of the two diameters” described by Thoreau in *Walden* is a now-famous example. After having determined that the pond’s “line of greatest length intersected the line of greatest breadth *exactly* at the point of greatest depth,” Thoreau proposed that “Such a rule. . . not only guides us toward the sun in the system and the heart in man, but draw lines through the length and breadth of the aggregate of a man’s particular daily behaviors [. . .] and where they intersect will be the height or depth of his character.”<sup>30</sup> Ishmael’s decision to embody a similar science-spirit cooperation suggests that Melville also considered the value of combining ethical-spiritual pursuits with the application of accurate measuring learned through surveying training, in order to achieve the anthropomorphic synergies insisted upon by Emerson. Melville once bestowed high praise on Emerson by calling him “a thought-diver” while professing, “I love all men who *dive*.”<sup>31</sup> Here Ishmael, by plunging into the whale skeleton with a yardstick to use its anatomy as a hybridized testing ground for complex speculation, demonstrates that one method of diving is measuring.

In his 1857 novel, *The Confidence Man*, Melville seems equally interested in the anthropomorphic application of geometric and geographic principles. Chapter 36 portrays a conversation between the “cosmopolitan” and Mark Winsome. The cosmopolitan is a shape-shifting cynic who arguably embodies both a satanic force and a type of deep pessimism that Melville himself was prone to in his blackest moods. Winsome is a “mystic” transcendentalist modeled physically and psychologically on Ralph Waldo Emerson.

The chapter’s verbal sparring turns into a debate on epistemology when Winsome expounds two contradictory “doctrines” or axioms. The “doctrine of labels” holds that nature offers man ample means of discerning and identifying the character of

its creations, including man, as illustrated by the warning rattle of a rattlesnake. The “doctrine of triangles,” espoused by the idealist in the same conversation, holds that in estimating others we are impeded by insufficient information. “Nobody knows who anybody is” Winsome muses, because “the data which life furnishes, towards forming a true estimate of any being, are as insufficient to that end as in geometry one side given would be to determine the triangle.”<sup>32</sup> When the cosmopolitan points out the inconsistency of the two doctrines, the transcendentalist’s retort, echoing famous passages in both Emerson’s “Self-Reliance” and Whitman’s *Leaves of Grass*, is that he “seldom cares to be consistent.”<sup>33</sup>

The transcendentalist justifies his inconsistency, however, by echoing Thoreau. Alluding to the landscape itself which, because it is “nearly all hill and dale,” does not maintain “a certain level at all times,” Winsome points out that the human intellect inevitably submits to “natural inequalities” reflected physically in nature.<sup>34</sup> Accordingly, he asserts that these inequalities nullify a man’s obligation to maintain an unvarying or consistent philosophical level. Here Winsome’s argument closely resembles several passages in *Walden* that compare the topography of the pond environment with the character of its human inhabitant. It also displays consciousness of a methodology used by Thoreau when he proposed the use of measurable geometry as the measure of a man.

It’s noteworthy that in conveying his axiom equating environmental traits with intellectual traits, Melville’s transcendentalist uses the topography of the Erie Canal as his illustration:

Advance into knowledge is just like advance upon the grand Erie canal, where from the character of the country, change of level is inevitable; you are locked up and locked down with perpetual inconsistencies; and yet all the time you get on; while the dullest part of the whole route is what the boatmen call the ‘long level’—a consistently flat surface of sixty miles through stagnant swamps.<sup>35</sup>

Melville failed to get the canal surveyor’s job he applied for in 1839, but one would not have guessed this from the above passage, which offers evidence of his practical familiarity with topographic leveling operations essential to canal surveying and engineering. This observation would fit seamlessly into any of Thoreau’s major works, which habitually assimilate human disposition and landscape disposition.

Just as significantly, the cosmopolitan’s rejoinder to Winsome’s analogizing, “after all these weary lockings-up and lockings-down, upon how much of a higher plain do you finally stand?”<sup>36</sup>—implicitly accepts his anthropomorphic application of natural law while adhering to a Thoreau-like vocabulary. And when the cosmopolitan

ultimately concludes, “I reject your analogy” but divulges that he is also bewitched by the transcendentalist’s “tempting discourse,”<sup>37</sup> he reveals a head-heart conflict about metaphysics that was shared by Melville, who was himself both intrigued by and skeptical of the more numinous principles of Kantian transcendentalism.

“The Encantadas,” a text containing the purest, starkest and most profound working-out of Melville’s dissent from idealism, also accepts and exemplifies the practice of illustrating metaphysics through landscape analysis. As essentially a tour guide who wants his reader to see and not just read about the landscape he is describing, Melville’s narrator is like Thoreau at Walden, whose decision to carefully survey the pond was in essence a highly appropriate response to the Kantian assertion of transcendental “unity of apperception.”<sup>38</sup>

This may be described as a belief that there existed a unity of all forms of knowledge available to the senses, and that forms of perception—conceptual activity like careful measuring and sensory reception like deriving conscious or unconscious insight from the acquired data—operate side by side and simultaneously: there is no state at which one is operating and other is not. In other words, there really could be no such thing as the ascertainment of dry facts empty of conceptual knowledge and content. Facts could not actually be empty because content and concept were one and the same.<sup>39</sup>

Believing in these principles certainly made it easier for Thoreau to justify the many tedious hours he spent chaining distances and recording bearings while surveying farms and woodlots for pay. Such a belief was also the perfect justification for the weeks of substantial physical labor Thoreau expended in surveying Walden Pond for no pay at all. Kant implied that the value of imaginative “synthesis” was that it “produced nature” by uniting perceptual forms within a “common representation” that bespoke the simultaneity and co-dependence of sensibility and understanding. In Thoreau’s case, this “representation” of blended perceptions was the Walden Map.

Melville also understood these precepts. Whereas in *Walden* Thoreau placed himself at a crucial and strategic location by standing on the surface of the pond and recording compass bearings to significant points along the pond perimeter, Melville in “The Encantadas” positions himself atop the summit of Rock Rodondo, at an elevation of 250 feet, where he begins by noting the wholeness and vastness of the view—“Come and be rewarded with the view from our tower. . . . Does any balloonist, does the outlooking man in the moon, take a broader view of space?” Though it is extremely unlikely that Melville ever actually ascended Rock Rodondo, his narrator in “The Encantadas,” assuming the persona of guide to the strange landscape, mimics cultural roles that would have been recognized by his readership. He is at once a figurative

member of the U.S. Exploring Expedition, a figurative correspondent to the U. S. Coast Survey, a putative crewmember with Charles Darwin on the H.M.S *Beagle*, and a simple surveyor-cartographer taking compass bearings to reference points in order to create an accurate map: “You see nothing; but permit me to point out the direction, if not the places, of certain interesting objects in the vast sea. . .”<sup>40</sup>

Like Thoreau, whose determination of “True Meridian” while drafting the Walden map had established his exact position on the earth’s surface, Melville locates himself in relation to topographical features but maps objects on the horizon on a much larger scale. He divulges that he is ten miles from the equator, six hundred miles from “the continent” of South America; Polynesia lies “hundreds of leagues” to the southwest; to the “straight west, on the precise line of parallel” it is 5,000 miles to “the Kingsmills” or Gilbert Islands.<sup>41</sup> “Having thus by such distant references. . . settled our relative place on the sea,” Melville next considers “objects not quite so remote,” among which the “grim and charred Enchanted Isles” are his immediate interest, especially the largest of the group, Albemarle.<sup>42</sup> This crater-shaped headland, Melville notes impressionistically, is “sixty miles or more long, and fifteen broad,” and “cut by the Equator exactly as a knife cuts straight through the center of a pumpkin pie.”<sup>43</sup>

The yawning craters, calderas, fumaroles, vents and cones of the Galapagos had reminded Darwin the “iron furnaces at Wolverhampton.”<sup>44</sup> Melville, after describing the wasteland of Narborough as “one seamed clinker from top to bottom; abounding in black caves like smithies; its metallic shore ringing under foot like plates of iron; its central volcanoes grouped like a gigantic chimney-stack,”<sup>45</sup> turns his attention to Abington Isle, a place of even greater desolation, inflecting his geographic study with thoughts that strive palpably to convey atmospheric sterility and Biblical despair: “I doubt whether two human beings ever touched upon that spot” where “Adam and his billions of posterity remain uncreated.” The Galapagos, Melville implies, is not only pre-lapsarian but pre-Edenic, an utterly benighted place, predating the light of creation—older than God. Reaching for an appellation sufficient to convey the spot’s bleakness and misery, he christens it an “Archipelago of aridities, without inhabitant, history, or hope of either in all time to come.”<sup>46</sup> The text’s recorded directional bearings, readings of distance and level, and descriptions of topographical features are suffused with extravagant verbal images of the surveyed area as a horrific, ahistoric, unredeemed wasteland. As his only non-verbal evidence of the character or the region, Melville offers the letter-map, a shape classifiable as both geomorphology and semiology but neither completely.

Interpreting Melville’s Galalagos map, the first thing we notice is that it is image and language—a linguistic signifier grounded in the idea that maps and language have

much in common as subjective texts that are a step removed from the real and therefore saturated with ideology. Melville's choice of an "E" is both a cartographic shortcut and an interactive metaphor, a device by which two subjects interact so that the principal subject or focus is seen through a subsidiary subject or frame. The result is that features, implications and commonplaces normally associated with the subsidiary subject (in this case the linguistic figure) are displaced or transferred onto the principal subject (the real geography of the islands).

As Max Black claimed in his thorough analysis of differences between scientific and literary metaphors, the transfer is selective; the subsidiary subject works as a filter, producing new implied meanings for the principal subject. In other words, the filtering element creates analogies rather than simply spelling out preexisting ones.<sup>47</sup> Melville, for example, exploits the sharp contours of the letter's shape, which is not the real shape of the islands, to assign the "black jaws" of Albemarle a menacing tone similar to that achieved in "Benito Cereno," which appeared in *Putnam's* just a year after "The Encantadas" and includes the image of rebelling slaves whose "red tongues lolled, wolf-like from their black mouths."<sup>48</sup>

Though this part of Melville's "analogical transfer of a vocabulary"<sup>49</sup> would have been possible with a capital E turned in any direction, there is a more drastic form of terror present namely in the backward E. The figure at once reinforces and defies the more general semiotic category of which both cartographic symbols and linguistic symbols consist—language itself. Barely sufficient as science, Melville's ironic "familiar diagram" is resonant and shocking as aesthetics—an aberrant alteration and depletion of an accustomed, recurring semiotic value. As such, it echoes the whiteness of the whale in *Moby-Dick*, which acts as "the intensifying agent in things the most appalling to mankind" by reason of its precise display of what Melville terms "the visible absence of color and at the same time the concrete of all colors."<sup>50</sup> The phenomenology of "reading" the map therefore involves successive processes: reasoned recognition of an ubiquitous linguistic grapheme, followed by the instinctive comprehension that the symbol is an estranged reflection of itself, a *doppelgänger* E offering no denotative possibilities other than the patently contradictory.

What do a reversed signifier and the meaning of Melville's narrative have in common? "The Encantadas" itself, with the letter map as its centerpiece, may be understood as a *tour de force* of reversed signification, especially when read as an element of an intellectual context dominated by Emerson and a cultural context gripped by the debate between evolutionary science and religious faith.

Behind nearly all of Thoreau's claimed associations between the philosophic and the scientific, and behind Melville's more skeptical experimentations with the same

linkages in *Moby Dick* and elsewhere, stands the figure of Emerson. In *Nature*, Emerson expressed faith in the signifier, presenting the universality of linguistic morphemes as implicit evidence of the Oversoul. “The same symbols are found to make the original elements of all languages,” a uniformity that extended even into linguistic combinations: “the idioms of all languages approach each other in passages of greatest eloquence and power.”<sup>51</sup> These claims were well-suited to Transcendentalist thinking and of a piece with those of comparative philologists in the late eighteenth and early nineteenth centuries, who “sought to map languages as comparative anatomists mapped organisms.”<sup>52</sup>

For Emerson, putative equivalencies across cultures and grammars confirmed that language possessed a stable nomenclative power and that linguistic signs exhibited real relationships between signifier and signified, relationships imaged in the natural world. Emerson alluded to an “immediate dependence of language upon nature.”<sup>53</sup> Simply stated, the use of language evinced “man’s power to connect his thought with its proper symbol”<sup>54</sup>—a faculty at once vital, positive, and self-actualizing.

More than 70 years after the publication of *Nature*, the posthumously published work of Swiss linguist Ferdinand de Saussure severely revised the assertions about comparative philology on which Emerson had relied. In his *Course in General Linguistics*, de Saussure cogently argued the disconcerting notion that where language was concerned, “the bond between signifier and the signified is arbitrary,”<sup>55</sup> that the relation between words and things was not based on actual or natural analogical links, but that instead language was wholly conventional. The value of a linguistic term, de Saussure proposed, was determined by its environment, not by *a priori* knowledge. It followed that linguistic signs did not stand for concepts or objects pre-existing in the natural world and did not have equivalents in meaning from one language to the next. De Saussure established that concepts were “not linked by any inner relationship” to the verbal or written signs that designated them; they therefore “could be represented equally by . . . any other sequence” of signs or sounds.<sup>56</sup> As the “father of modern linguistics” concluded, “No one disputes the principle of the arbitrary nature of the sign.”<sup>57</sup>

De Saussure’s insights about language also relied on a categorical differentiation between *symbols* and *signs*. Symbols exhibit “the rudiment of a natural bond between signifier and signified”; linguistic signs are purely “differential,” defined not by any positive content but negatively by their relations with other terms of the system. The most precise characteristic of linguistic signifiers, therefore, is being what other signifiers are not.<sup>58</sup>

What makes Melville's letter-map a special and interesting case is that it is both symbol and sign. As symbol, the map is simply an unusually subjective map, not different in kind but in degree from other maps that purport to represent reality and are also symbolic. Readers of "The Encantadas" who hadn't seen a standard Galapagos map would certainly have guessed that in choosing to signify the islands with an E, Melville sacrificed exactitude in furtherance of a stated emphasis on the "black jaws" of Albemarle and his idea of the land mass itself as a wolf's head. This was already thought-provoking, inviting a detailed imagining of wolf-like features in both the shape and the location it represented. But in offering a map that was also a linguistic sign, Melville created a term that was "dual" in more than one sense. First, it combined language and symbol and undeniably retained qualities and functions of both: to the extent that it stood for the shape of islands, retaining a rudiment of relation to them, it was symbol; to the extent that it was a recognizable and "familiar" morpheme of the Latin alphabet, it was sign.

A more radical duality lay in the map's *manner* of representing language. The arbitrariness of the signifier is undeniable, but what about backward signifiers? Linguistic signs, de Saussure also suggested, attain what meaning they have through a negative relation to other signifiers within the system. Melville's E exploits a negative relation to the system as a whole. By replacing the Galapagos with an E that is not an E, Melville introduces a blatant contradiction. The figure is not only a dark twin of the "familiar diagram" promised the reader, but a dark twin of language itself. Whether it is read as symbol or sign—as letter or map—the product of Melville's "literary cartography" validates neither meaning-making praxis; instead it underscores the limitations of both signification systems and perhaps all signification systems.

As the map attests, Melville could agree with Emerson in *Nature* that "The world is emblematic," that "The visible world and the relation of its parts, is the dial plate of the invisible," and finally that linguistic signification, "the conversion of an outward phenomenon into a type"<sup>59</sup> evinced an affective power. But where the satisfactory cooperation of idea and sign was concerned, the Galapagos was problematic. What signifier was commensurate to the "woe-begone landscape" of "lasting sorrow and penal hopelessness" where "no voice, no low, no howl is heard" and "the chief sound of life . . . is a hiss"?<sup>60</sup> If, as Emerson asserted, "The corruption of man is followed by the corruption of language,"<sup>61</sup> only a willful semiotic distortion or play on codes might serve, paradoxically, to reinstate a better than arbitrary relation of object and signifier. Perhaps the fallen world was best imaged by the fallen word.

Questioning mimesis itself is only part of the potentially decentering value of the backward E. Melville also invests the symbol with frightening theological meaning,

beginning with the title of the chapter in which the letter-map appears, “A Pisgah View From the Rock.” Pisgah in Hebrew is a general term for “summit” or “peak,” but Melville has in mind a specific Biblical allusion. In Deuteronomy, God commanded Moses to climb Pisgah to view the Promised Land from the summit of Mount Nebo:

Then Moses went up from the plains of Moab to Mount Nebo, to the top of Pisgah . . . . And the Lord showed him all the land of Gilead as far as Dan. . . . Then the Lord said to him, “This is the land of which I swore to give Abraham, Isaac and Jacob, saying, ‘I will give it to your descendants. (Deut 34: 1-4)<sup>62</sup>

In “The Encantadas,” Melville escorts his readers to the summit of Rock Rodondo for a visualization not of the Promised Land, but of an utterly desolate and disorienting landscape, unknowable and alien. The text is centrally preoccupied with the contrast—fundamental and qualitative—between the actual and the Biblical, the dystopian and utopian, the Darwinian and Edenic. The stark disconnect between the “promised” landscape alluded to in Melville’s chapter title and the chthonian nightmare cosmos of the islands is presented on the visual level through an austere, jagged form that now does more than simply reimagine meaning-making taxonomy—it overturns Judeo-Christian religious mythology.

“Demon est deus inversus” is an ancient kabbalistic aphorism often translated as “the devil is the inverse of God.” Though this axiom was not popularized until the late nineteenth-century, it nevertheless suggests a way of understanding both the letter-map and “The Encantadas” as a whole.<sup>63</sup> The essential meaning is that the way to know anything is by contrast with what it is not, an opposition that theosophist John Algeo compares to “the shadow by which we recognize light, the night that separates the days, the cold without which we have no sense of heat.”<sup>64</sup> As with Ishmael’s surrender to the all-nullifying “incantation” of whiteness in *Moby-Dick*, it is the apperception of polar opposites that incites “nameless terror” and enables an intuitive “knowledge of demonism in the world.”<sup>65</sup>

Melville’s enduring fascination with such inversions is semaphored early in “The Encantadas,” in the fascinating “Sketch Second: The Two Sides to a Tortoise,” which sees in the dark and light sides of Galapagos tortoises (“mystic creatures” with a “melancholy” back and a “yellowish or golden” breast) a natural science phenomenon urging philosophical dualism: “You should not swear that the tortoise has no dark side. Enjoy the bright, keep it turned up perpetually if you can, but be honest, and don’t deny the black.”<sup>66</sup> To authentically know both “black and bright,” Melville warns, one must transpose the representation and “turn the tortoise from its natural position.”<sup>67</sup>

Melville seems to have sensed that putting on display the dark side of the tortoise and the dark or benighted aspects of linguistic convention were related processes. In “The Encantadas” he severed the “natural” connection between language and things, first by exposing the dark side of the world—the enigmatic, anti-mythic Galapagos landscape, a place effectively beyond the tolerated philosophical vocabulary of his culture—then by signifying this substitute Promised Land not with a known “familiar diagram” but with an inverted one. What better way to show the incongruity of language and real things than with an image that adequately represented the real thing but was the opposite of language? Doing so was an implicit argument for the universality of a signifier which was emphatically no signifier at all. Showing Emerson to be correct about the corruption of language concepts came at the cost of showing that he was wrong about the universality of language concepts.

Melville’s post-modern world, utterly bereft of transcendence, therefore signals deep existential despair. His survey map is not a world like that imaged in Thoreau’s Walden map—a microcosm in which prevailing epistemology has been transcended and subversively re-imagined—but one in which meaning is nullified.

As the letter-map attests, Melville’s concerns in “The Encantadas” comprise weighty eschatological and ontological enigmas. The map cannot signify the familiar letter E, being its antithesis; nor can it signify “Eden” because Melville refers pointedly to the island world as ominously fallen and terrifyingly anti-Edenic. If it relates the titular terms “Encantadas” or “Enchanted,” it does so in a way that dilutes these connotations of delight or charm with those of Darwinian terror. And while Emerson is unmistakably present in the linkages Thoreau made at Walden between the poetic and the scientific, he is not absent from Melville’s more skeptical experimentations presented within a text that offers a direct challenge to the Emersonian worldview. With his doppelgänger E, Melville signifies the opposite of Eden, the opposite of Enchanted, the opposite of Emerson. If Melville’s map had been published in 1854 as intended and an astute reader or critic had become interested enough in its relation to the Walden map to compare the two images side by side, that reader might well have discerned the complicated verity that if Transcendental idealism could be expressed visually in map or survey form, so could the opposite of idealism.

How did Melville arrive at such a rich yet compact conceptualization of *nada*? The pursuit of an answer leads to Hawthorne. The letter E is the most frequently-appearing alphabetic unit in the English language, constituting almost thirteen percent of the grammar of practical usage. The most commonly appearing first-letter in the English language, however, is A. Just under twelve percent of English words begin with the grapheme that Pearl in *The Scarlet Letter* calls “the great letter A,”<sup>68</sup> a linguistic

symbol infused by Hawthorne with connotations almost as disturbing and disruptive as Melville's E.

Parallels between the letters of Hawthorne and Melville are multiple and striking. Like Melville's E, Hawthorne's A is a linguistic signifier invested with subversive denotations contradictory to its accepted value. Rather than signifying Adultery or Adulteress, the letter is assigned the diametrically opposed meanings of Angel, Admirable, Able, Affection, or of an Anne Hutchinson "sainted" by her Antinomianism and therefore by her defiance of socially established morality. As Melville would later do, Hawthorne uses his letter to rewrite history and counteract dogma. A telling, radical overturning of accepted signification occurs in Hawthorne's Chapter Two, "The Revelation," where the image of Hester, the sexual sinner enduring public ignominy with her illegitimate child on the scaffold, is transformed into Catholic iconography surrounding the Virgin Mary:

Had there been a Papist among the crowd of Puritans, he might have seen in this beautiful woman, so picturesque in her attire and mien, and with the infant at her bosom, an object to remind him of the image of Divine Maternity...<sup>69</sup>

This compels consideration of meanings that are established only by contrast. What is the exact opposite, the precise reverse, of the "brazen hussy" or deviant whore of Babylon to whom Hester is likened by her community? For Hawthorne, it is the "sacred image of sinless motherhood, whose infant was to redeem the world."<sup>70</sup>

And Hawthorne is consistent in his refusal to read the latter any other way. The ostensible, public meaning of the A is actually the one that receives the least attention in the novel. That the words "adultery" or "adulteress" do not appear in the novel's text indicates that the normed interpretation of the letter is utterly barred—extramarital sex is the one thing the letter cannot mean. To the extent that Hawthorne is conspicuously *not* writing about adultery, not writing about the titular scarlet letter but doppelgänger meanings like Angel or Admirable, he resembles Melville in "The Encantadas," who is just as emphatically not writing about a world that is Enchanted, Edenic or Emersonian.

Hawthorne's scarlet letter, like Melville's later version of it, is both symbol and sign. Its ornate beauty reflects the transcendent beauty of Hester and Pearl, therefore displaying the "rudiment of a relation" to a literal counterpart, just as the shape of Melville's E suggests manifest qualities—predation and ferocity—in the Darwinian world of the Galapagos. The fact that both morphemes work well as symbols but are

much less tractable as linguistic signs is historically proleptic, intimating de Saussurean arbitrariness in texts published before de Saussure was born. One meaning that Hawthorne never discounts, however, is that which recognizes the A as the “great letter” conned by Pearl in didactic texts—her primer and horn book—as the first of her language, the first in alphabetical taxonomy, the origin and commencement of all meaning encompassed by the symbolic order into which she is indoctrinated. Accordingly, Hawthorne’s novel—the first letter of which is likewise a capital A—gradually accumulates definitions for the chosen signifier, eventually investing it with manifold nuances that exclude only the socially accepted one. While this is not very different from what Melville does with his letter by abruptly closing off all interpretive possibilities other than the dystopian one he wants, there is a difference: the backward E predicts the end of signification, but with the A all signification begins.

In other words, Hawthorne’s doppelgänger A proposes not a faith-destroying *memento mori*, the term used by Melville to describe the Galapagos, but a redemptive sign, bestowing on Hester’s sexual sin a secular “consecration” that dispels and mitigates agony. Hawthorne’s Nature is represented by the red rose, a “sweet moral blossom” that “could pity and be kind” to the imprisoned outlaw. This is not Melville’s aggressively disenchanting Nature, imaged appropriately in an accursed wasteland of penal hopelessness. In place of the kabbalistic *Demon est deus inversus* as a means of interpreting Melville, Hawthorne justifies a transposition: *Deus est demon inversus*.

Considered together, the visual images of Thoreau, Hawthorne and Melville tell us something new and interesting about how romantic symbolism was used by major writers of the mid-nineteenth century. What they suggest is that *Walden* and “The Encantadas” may be productively compared as examples of an 1850s literary-historical context in which experiments with *cartographic products* registered disparities in outlook between science and aesthetics while testifying to rich potentialities in their joint application. It was their training as surveyors, after all, that enabled Thoreau and Melville to put on display a version of poetic imaginative truth that had passed through the alembic of natural science. When Emerson called for American poets who would “make free” with metaphors in order to “assert the predominance of the soul,”<sup>71</sup> he implied that science and literature could gain something from each other. Discussing divergences between intuition and reason, Emerson noted that “the sensual man [in this context the scientist] conforms thoughts to things. The poet conforms things to thoughts.”<sup>72</sup> Each of the visual metaphors discussed here accomplishes the requisite conversion of thing to thought, with meaningful differences.

The two maps in the grouping—those of Thoreau and Melville—suggest what science can gain from the literary imagination. Thoreau’s amalgamation of physics and

philosophy produced an exuberant image that inverted the world; Melville's produced bleak reversal and hyperbolic horror. Both of these perceptual maneuvers are customarily shunned in scientific discourse. Under the control of literary artists, however, they expose the unconscious assumptions of science, suggesting what is possible when the discipline embraces allegory and refrains from automatic rejection of creative-intuitive faculties. In other words, they may be perceived as images that are not adulterations of scientific method, but purifications and amplifications of it.

The two linguistic signs in the grouping—those of Hawthorne and Melville—highlight what literature can gain from science by showing how the epistemological standards of aesthetics and hard science differ. Eleonora Montuschi describes the models and metaphors typically used by scientists as alternative descriptions of literal truth that are on the whole “not subject to formal contradictoriness” in the manner of literary metaphors. Their “truth criteria,” Montuschi argues, “are much clearer than in the case of the poetic metaphor.”<sup>73</sup> Metaphorical models in scientific discourse should be based on strong pre-existing similarity or analogy, making it possible for them to become “perfect metaphors”—constructs that might eventually serve as literal interpretations. A constitutive trait of literary metaphors, on the other hand, is that they are often intentionally imperfect or contradictory. “Creativity” may apply to scientific models and metaphors, but it is limited by the “fear of producing paradoxical results.”<sup>74</sup>

For Thoreau, Melville and Hawthorne, the production of paradoxical results is an end in itself, a primary goal. These writers, all determined to endorse Nature over Civilization, demonstrate the connotative potential of disparities and paradoxes—the power of disparate things. Inspired by Emerson, Thoreau decided that the world was best imaged in a form measured accurately but viewed upside down. The broad meaning I've attributed to Melville's letter-map comes from a perception of its analogous ability to return the gaze of science with an imaginative gaze willing to transform accepted “truth criteria.” And while *The Scarlet Letter* does not address nineteenth century science *per se*, Hawthorne's enshrinement of not just theological but generic antinomianism involves inherent challenges to known verities and accepted fact. While science shuns paradox to its detriment, the ineluctable shortcomings of its “perfect metaphors” nevertheless provide, as Whitman asserted, the raw material for the poetic imagination to explore to its own enrichment.

With the Walden Map, Thoreau overturned a scientific signification; with the scarlet letter, Hawthorne overturned a literary or linguistic one. Melville, however, exhibited and drew upon the power of both processes. His visual product in the letter-map therefore compares in interesting ways with a modern attempt to lay bare the

meaning of the Galapagos, a map created by H. Mallette Dean in 1940 for the rare Grabhorn Press edition of “The Encantadas.”

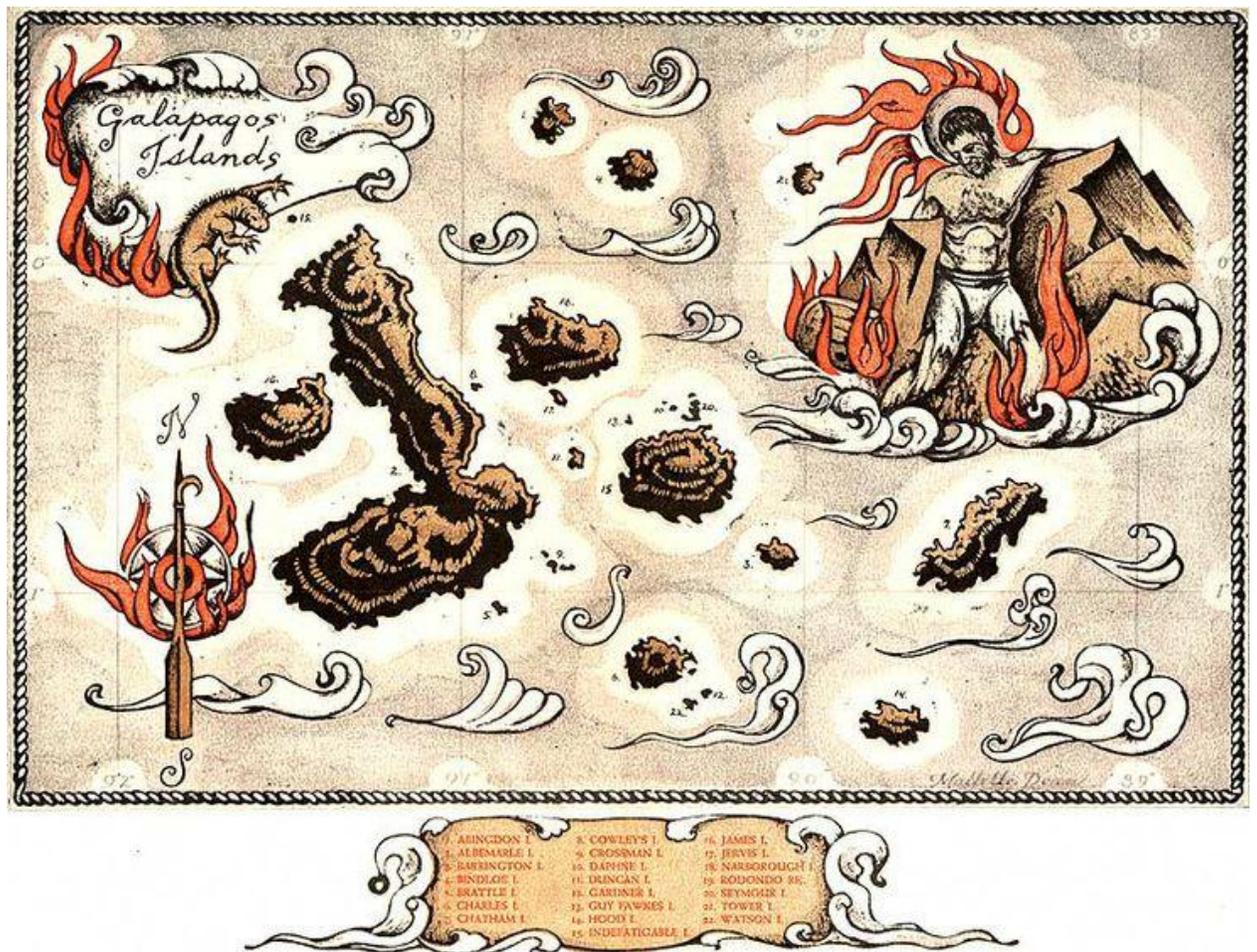


Figure 7

Dean’s fascinating illustration nowhere violates the tenor of Melville’s prose, but what the twentieth-century artist expresses, Melville’s letter-map condenses, effectively synthesizing the E-shaped island contour at the left of Dean’s image with the misery of the bound and burning martyr at the right. Both texts depict a totality of dead belief, framed amid a wind-blown inferno or, in Melville’s terms, “the world . . . after a penal conflagration.”<sup>75</sup>

What enabled Melville’s deep discernment seems obvious. He could not have written “The Encantadas” with such power and vision without experiencing the ghostly

islands first-hand, without essentially retracing Darwin's voyage on the *Beagle* aboard the *Acushnet*. Because Thoreau never went on such a voyage or saw such a place, his view of both science and nature was more Emersonian than Darwinian. Melville evinced the opposite balance. His 1841 encounter with the Enchanted Isles brought him face-to-face with a landscape that offered no purchase for apprehension by means of either the quantification newly learned at the Lansingburgh Academy or by any experience to date. What it did provide, however, was a stark enigma for which no "perfect metaphor" would do. Darwin's zoological charts offered confident numerical estimates of Galapagos organisms, but Melville's simulation of those charts in "The Encantadas" exposed the inadequacy of science alone, averring that while snakes and spiders were countable, the number of "Devils" and "man-haters" on the isles remained "Unknown."<sup>76</sup>

Laura Dassow Walls, in her award-winning recent book about the influence of Alexander von Humboldt on nineteenth-century writers, laments the sundering of ties between American scientific and literary cultures that began in the mid-nineteenth century and wonders what would have happened if Nathaniel Hawthorne had been chosen to accompany Wilkes and the United States Exploring Expedition as its official historian.<sup>77</sup> Hawthorne had "lobbied hard" for the position, but when nothing came of it the job devolved upon Lieutenant Wilkes, a fine surveyor but poor writer, who produced an incoherent narrative of the expedition that William Ragan Stanton labeled "a national disaster" for its embodiment of sadly wasted historical opportunity.<sup>78</sup>

How a four-year voyage to the limits of the known world and beyond might have stoked the fires of Hawthorne's imagination for the remainder of his life—and what literary treasures might have resulted—we'll never know. It's probable that the Hawthorne canon would be very different had he confronted his own version of Melville's "archipelago of aridities," perhaps as different as the Thoreau canon would be had he seen and surveyed such a place. Walls's projection that the costs of the science-poetry schism were considerable and irreparable on both sides seems accurate. But Melville's backward E, an object-text that is simultaneously map and metaphor, symbol and signifier, reminds us that the disciplinary separation wasn't total and that barriers were not impermeable. It therefore works well as a compact emblem of what might have been, of synergies that in other contexts remained unrealized, and which both sides of the increasingly artificial science-poetry divide should acknowledge and discuss.

## NOTES

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<sup>1</sup> For a detailed description of the Walden Pond survey, see Patrick Chura, *Thoreau the Land Surveyor* (Gainesville: UP of Florida, 2010, 2011), pp. 22-42.

<sup>2</sup> Henry David Thoreau, *Journal*, January 5, 1855. eds. Bradford Torrey and Francis H. Allen, 14 vols. (Boston: Houghton Mifflin, 1906; New York: Dover, 1962), 102-3.

<sup>3</sup> Ralph Waldo Emerson, *Nature*, in *The Essential Writings of Ralph Waldo Emerson*, ed. Brooks Atkinson (New York: Modern Library), 26.

<sup>4</sup> *Ibid.*, 34.

<sup>5</sup> Nick Danforth, “How the North Ended Up on the Top of the Map: A Cartographic History of What’s Up” *Al Jazeera America*, February 16, 2014. Accessed June 1, 2014. [<http://america.aljazeera.com/opinions/2014/2/maps-cartographycolonialismnortheurocentricglobe.html>]

<sup>6</sup> William P. Wreden’s 1940 limited edition reprint of “The Encantadas,” for example, uses the downturned E and explains, “To make sure the omission [of the map] was not repeated in *The Piazza Tales*, the letter “E” was written in a large hand.” Herman Melville, “The Encantadas,” ed. William P. Wreden (San Francisco: Grabhorn Press, 1940), 117.

<sup>7</sup> Herman Melville, *The Piazza Tales and Other Prose Pieces 1839-1860*, Northwestern Newberry Edition, Volume Nine ed. Merton M. Sealts (Evanston: Northwestern University Press; Chicago: Newberry Library, 1987), 609.

<sup>8</sup> Melville, “The Encantadas,” (New York: Library of America, 1987; Chicago: Newberry Library, 1987), 780.

<sup>9</sup> While writing “The Encantadas” Melville used several cartographic sources but almost certainly saw William Hooker’s “Gallapagos Islands” (sic) chart in David Porter’s *Journal of a Cruise*, eds. R.D. Madison and Karen Hamon (Annapolis, MD: Naval Institute Press, 1986).

<sup>10</sup> Melville, “The Encantadas,” 781.

<sup>11</sup> *Ibid.*, 766.

<sup>12</sup> Quoted in Chura, 161.

<sup>13</sup> Jay Leyda, *The Melville Log: A Documentary Life of Herman Melville*, Vol. 1 (New York: Harcourt Brace, 1951), 82.

<sup>14</sup> *Ibid.*, 83.

<sup>15</sup> Melville's interest in the Exploring Expedition prompted David Jaffe to argue that Charles Wilkes was a model for the character of Captain Ahab. David Jaffe, *The Stormy Petrel and the White Whale*, (Baltimore: Port City Press, 1976).

<sup>16</sup> Samuel Clemens, *Mark Twain's Autobiography*, ed. Albert Bigelow Paine, vol. II, (New York: P.F. Collier, 1924) pp. 120-21.

<sup>17</sup> Emerson, *Nature*, 17.

<sup>18</sup> Henry David Thoreau, *A Week, Walden, the Maine Woods, Cape Cod* (New York: Library of America, 1985), 295.

<sup>19</sup> Melville, *Moby-Dick, A Norton Critical Edition*, eds. Hershel Parker and Harrison Hayford (New York: W.W. Norton, 2002), 344.

<sup>20</sup> *Ibid.*, 345.

<sup>21</sup> Melville, *Moby-Dick*, 346.

<sup>22</sup> *Ibid.*, 346.

<sup>23</sup> Henry David Thoreau, *Field-Notes of Surveys* (Concord Free Public Library MSS), 75. Quoted in Chura, 123.

<sup>24</sup> Melville, *Moby-Dick*, 346-7.

<sup>25</sup> *Ibid.*, 346-7 .

<sup>26</sup> Emerson, *Nature*, 14, 21.

<sup>27</sup> *Ibid.*, 32.

<sup>28</sup> Melville, *Moby-Dick*, 276

<sup>29</sup> Walt Whitman, "Preface to Leaves of Grass" (1955), in eds. Baym, et. al. *The Norton Anthology of American Literature*, Shorter 8th Edition, vol. B (New York: W.W. Norton, 2012), 1326.

<sup>30</sup> Henry David Thoreau, *Walden: or, Life in the Woods*, ed. Jeffrey S. Cramer (New Haven: Yale UP), 280.

<sup>31</sup> Melville to Evert Duyckinck, 3 March 1849, quoted in ed. Hershel Parker, *The Confidence-Man: His Masquerade* (New York: W.W. Norton, 2006), 413.

<sup>32</sup> Melville, *The Confidence-Man: His Masquerade*, ed. Hershel Parker. (New York: W.W. Norton, 2006), 194.

<sup>33</sup> *Ibid.*, 194.

<sup>34</sup> *Ibid.*, 194-5.

<sup>35</sup> Melville, *The Confidence Man*, 195.

<sup>36</sup> Ibid., 195.

<sup>37</sup> Ibid., 195.

<sup>38</sup> Immanuel Kant, *Critique of Pure Reason*, trans. Norman Kemp Smith (New York: St. Martin's, 1968), 131.

<sup>39</sup> Ibid., 131-137.

<sup>40</sup> Melville, "The Encantadas," 777-78.

<sup>41</sup> Ibid., 778.

<sup>42</sup> Ibid., 780.

<sup>43</sup> Ibid., 780.

<sup>44</sup> Quoted in Victor Wolfgang Von Hagen, "Introduction," "The Encantadas". San Francisco: Grabhorn Press, 1940, xiii.

<sup>45</sup> Melville, "The Encantadas," 780.

<sup>46</sup> Ibid., 783.

<sup>47</sup> Max Black, *Models and Metaphors* (Ithaca, NY: Cornell University Press, 1962), 238-9.

<sup>48</sup> Herman Melville, *Great Short Works*, ed. Warner Berthoff (New York: Perennial, 2004), 299.

<sup>49</sup> Black, 238-9.

<sup>50</sup> Melville, *Moby-Dick*, 165.

<sup>51</sup> Emerson, *Nature*, 15.

<sup>52</sup> Vincent B. Leitch, ed. *The Norton Anthology of Literary Criticism* (New York: W.W. Norton, 2010), 846.

<sup>53</sup> Emerson, *Nature*, 13.

<sup>54</sup> Ibid., 15.

<sup>55</sup> Ferdinand de Saussure, from *Course in General Linguistics* in Vincent B. Leitch, ed. *The Norton Anthology of Literary Criticism* (New York: W.W. Norton, 2010), 854.

<sup>56</sup> Ibid., 854.

<sup>57</sup> Ibid., 854.

<sup>58</sup> Ibid., 854.

<sup>59</sup> Emerson, *Nature*, 18.

<sup>60</sup> Melville, "The Encantadas," 765.

<sup>61</sup> Emerson, *Nature*, 15.

<sup>62</sup> *Holy Bible*, King James Version.

<sup>63</sup> Helena Blavatsky, *The Secret Doctrine* (London and New York: Theosophical Publishing Company, 1888), 478.

<sup>64</sup> John Algeo, "The Dark Side of Light." *Quest* 93.2 (March – April 2005):65-69.

<sup>65</sup> Melville, *Moby-Dick*,

<sup>66</sup> Melville, "The Encantadas," 769.

<sup>67</sup> *Ibid.*, 769.

<sup>68</sup> Nathaniel Hawthorne, *The Scarlet Letter*. 1850. (New York: Simon and Schuster, 1994): 186.

<sup>69</sup> *Ibid.*, 56,

<sup>70</sup> *Ibid.*, 56.

<sup>71</sup> Emerson, *Nature*, 28.

<sup>72</sup> *Ibid.*, 26.

<sup>73</sup> Eleonora Montuschi, "Metaphor in Science" in *A Companion to the Philosophy of Science*, ed. W. H. Newton-Smith (Malden, MA: Blackwell, 2000): 280.

<sup>74</sup> *Ibid.*, 281.

<sup>75</sup> Melville, "The Encantadas," 764.

<sup>76</sup> *Ibid.*, 781.

<sup>77</sup> Laura Dassow Walls, *The Passage to Cosmos* (Chicago: University of Chicago Press, 2009), 166.

<sup>78</sup> William Ragan Stanton, *The Great United States Exploring Expedition of 1838-1842*. (Berkeley: University of California Press, 1975): 308.