MELVILLE’S ONTOLOGY

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ABSTRACT

Meredith Farmer: Melville’s Ontology
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“Melville’s Ontology” responds to Melville’s surprisingly unexamined relationship to science—a relationship that radically transformed his portrayal of identity, cognition, politics, and texts. I begin with a vignette: Melville’s Captain Ahab is generally viewed as the very paradigm of a strong agent. But Ahab’s body has a “leak” that that “breaks” and “cracks” and lets a storm “burst in upon him.” This description of leaking is, counterintuitively, about weather penetrating Ahab. And long before his leak is visible, we find that “subtle agencies” of the “weather” “wrought on Ahab’s texture.” My argument is that in work from 1850 to 1857, or Melville’s late fiction—White-Jacket to The Confidence-Man—Melville represents humans as collections of invisible agencies, like atoms, which are constantly and chemically reassembled. And on that model “Ahab,” “White-Jacket,” and other characters are ultimately unified only in terms of analogically linked skins, jackets, names, and legal mandates. This allows Melville to forcefully push back against the idea of the autonomous agent. And it has a clear logic: Melville responds to debates about what constitutes a “person” by reframing the category as a legal construction. This project is ultimately about the contrast, in Melville’s work, between a kind of cosmopolitan hope that is based in scientific narratives (biology, chemistry, geology, meteorology, physics) and Melville’s resistance to legal and narrative incorporation. Rejecting stable identities for dynamic interactions makes room for Melville’s local cosmopolitanism, or his repeated move to privilege moments of contact over contracts. Moving to the level of exchangeable atoms is a great leveler—especially in a nation where notions of the liberal agent and concomitant natural rights have
been destroyed by the specter of racial slavery. Melville’s characters “expatriate [them]selves to
corporate with the universe,” are “fused into the universe of things,” and eventually find
themselves poured along into “one cosmopolitan and confident tide.” In short: Melville resists the
problems of “nation” not with the amplification of the “transnational” but through an attempt to
escape them for shared water and air: an essential reading now and a different sort of “global.”
For Krista Turner—
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Introduction: Melville’s Leaks

For years critics have viewed Melville’s Captain Ahab as the very paradigm of a strong, controlling agent. In 1927 William Faulkner described Ahab as “a man of forceful character” who is “bent on his own destruction and dragging his immediate world down with him with a despotic and utter disregard of them as individuals.”¹ In 1940, R.H. Gabriel described Melville as “the supreme individualist of the nineteenth century” while framing Ahab as “the personification of Melville’s individualism.”² And in 1945, R.E. Watters added that Ahab’s “fiery passions... served only to fuse other men into instruments for his own egocentric will.”³

This is by no means an outdated assumption. Instead, this sort of focus no longer matches critical tendencies. But in Hunting Captain Ahab, Clare Spark takes readings of our supposed villain as her foundation for a work about “effort to maintain authoritarian social relations in an age of democratic aspirations.” Along the way, Spark argues that for many Melvilleans, Ahab is “mad, self and socially destructive, tyrannical, and an archvillain”—even “the paradigm of social irresponsibility and his own worst enemy.”⁴ William Spanos mentions Ahab’s “final ritual gesture to galvanize the crew's obedience to his imperial iron will.”⁵ And Eric Wilson explains that “Melville’s Ahab transmutes his world—men, ocean, and whales—into his monomaniacal projects and ends by killing his crew, save one.”⁶

This critical consensus simply doesn’t hold against the text of Moby-Dick. Instead Ahab has a “leak” that “breaks” and “cracks” and lets a storm “burst in” upon him. He declares that he won’t “stop to plug [his] leak,” since he’s not even sure he could “find it… in this life’s howling gale.” And while Ahab does, eventually, ask Perth, the Pequod’s blacksmith, to forge, or weld, his “seam,” Perth replies that he can weld “all seams and dents but one.” This concern about “leaking” is, counterintuitively, about weather penetrating Ahab. And long before his leak is visible, we find that “subtle agencies” of the “weather” “wrought on Ahab’s texture.” We see, for example, in the chapter named “Ahab,” that “as the sky grew less gloomy,” Ahab “began to grow a little genial.” In fact, “he became still less and less a recluse” until “by and by, it came to pass that he was almost continually in the air.” And when Ahab finally goes out whaling, he and his environment merge: “he looked not unlike the weather horizon when a storm is coming up.” At the end of the day, Ahab actually seems to be an instrument of his environment, or to borrow from White-Jacket, a “universal absorber,” not an “impervious” coat.

This model arises as early as Moby-Dick’s second chapter—here with regard to Ishmael—

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7 This reading of Ahab arguably reaches its pinnacle in popular culture. Ray Bradbury and John Huston describe their film adaptation in terms of a “captain’s self-destructive obsession to hunt the white whale.” Nathaniel Philbrick offers an equally reductive reading in Vanity Fair: “In Melville’s view, it doesn’t take much to become a demagogue as long as you learn a few simple tricks. Dictators such as Hitler, Saddam Hussein, and Muammar Qaddafi are not geniuses; they are paranoid despot and expert manipulators of men. If you want to understand how these and other megalomaniacs pull it off, read the last third of Moby-Dick and watch as Ahab tightens his stranglehold on the Pequod’s crew in his increasingly horrifying quest for the White Whale.” This reading even finds its way into The New York Times and Washington Monthly, as Republicans forcing a government shutdown—and then Donald Trump—are framed as “Crazy Ahabs.” Nathaniel Philbrick, “The Road to Melville,” Vanity Fair, November 11, 2011; Charles Blow, “The Captain Ahabs of the House,” The New York Times, September 27, 2013; “Donald Trump Is Actually the Crazy-ass Captain Ahab from Moby Dick,” Washington Monthly, October 10, 2016.


9 Here we should consider Ahab’s tone. Starbuck wants to fix a leak in the Pequod’s hold, but Ahab tellingly responds: “‘Let it leak! I’m all aleak myself!’” In fact, he continues, everything is leaking: “Aye! leaks in leaks! not only full of leaky casks, but those leaky casks are in a leaky ship.” Instead of fighting he offers a resigned account: “‘I don’t stop to plug my leak; for who can find it in the deep-loaded hull; or how hope to plug it, even if found, in this life’s howling gale?’” Melville, Moby-Dick, 362.


who explains, in response to a “tempestuous wind”: “yes, these eyes are windows, and this body of mine is the house. What a pity they didn’t stop up the chinks and the crannies though, and thrust in a little lint here and there.”\(^\text{12}\) Ishmael presents his body as a system that can be overtaken by its environment. And my argument begins with this claim that throughout Melville’s work material bodies are constantly portrayed as having porous borders with things beyond themselves.

_Moby-Dick_ is a text full of permeability, fusion, and hybridity. Up on “The Mast-Head” we are led to imagine the “blending cadence of the waves with thoughts.” And down below we find Melville’s famous fantasy of merging while squeezing sperm together: “let us all squeeze ourselves into each other. Let us squeeze ourselves universally into… the milk and sperm of kindness.” We also encounter less ecstatic fusions, from Ahab’s prosthetic “dead stump” to the blending of countless threads, including one that leads Ishmael to confuse a quilt and Queequeg’s tattooed arm. Clearly part of what makes these moments interesting—at least in our own critical moment—is the mergence of “persons” and “things” in ways that seem to destabilize the “person.” When Ahab loses his leg, “his torn body and gashed soul bled into one another; and so interfusing, made him mad.” And in “A Squeeze of the Hand,” before people almost “squeeze” into “each other,” we find: “I squeezed that sperm till I myself almost melted into it.” Ishmael goes on to confuse sperm and his “co-laborers,” “mistaking their hands for the gentle globules.”\(^\text{13}\)

Ultimately, in Melville’s words, “no mere mortal who has at all gone down into himself will ever pretend that his slightest thought or act solely originates in his own defined identity” exactly because his “texture” is “porous.”\(^\text{14}\)

\(^{12}\) Melville, _Moby-Dick_, 25. This is, specifically, the “tempestuous wind Euroclydon,” which destroys St. Paul’s ship in Acts 27.14. Paul also notably describes humans as “leaky vessels” in Hebrews 2.1.

\(^{13}\) Melville, _Moby-Dick_, 136, 322, 139, 37, 156, 322.

\(^{14}\) Going “down into” oneself is a spatial and geological conception that explicitly privileges the idea of textures over “defined identity.” And Pierre’s “porous” “texture” is a leitmotif throughout the text: momentary feelings roll down Pierre’s soul like “melted lava.” And those feelings, like lava, leave “deep deposits.” Then “undefined half-suggestions… people the soul’s atmosphere, as thickly as in a soft, steady snow-storm, the snow-flakes people the air.” And by the end of the text, this logic of layering is direct: “Far as any geologist has yet gone down into the world, it is found to consist of nothing but surface stratified on
My thesis is that—at least in work from 1850 to 1857, *White-Jacket* to *The Confidence-Man*—Melville breaks down characters both physically (as material objects) and conceptually (as autonomous subjects) in ways that challenge the possibility of being hermetically sealed off from their environments. Interestingly enough, this “breaking down” involves not just dissolution but what Philip Armstrong rightly identifies as augmentation. Essentially, Melville counterintuitively decomposes “agents” by adding things to them. Physically, they absorb parts of their environments, or the atmosphere (as when “subtle agencies” “wrought on Ahab’s texture”). And conceptually Melville’s characters are coated with a variety of narrative investments (like Bartleby, read and re-read by the attorney). I describe this logic as “decomposition by addition,” which emphasizes Melville’s remarkable attempt to consider changes to identities in terms of what is generated instead of what is lost. And Melville considers cognition, politics, and even his own texts in terms of this expansive logic. For example, the protagonist of Melville’s Pierre finds a pamphlet in the lining of his jacket, “soft and worn almost to tissue,” or skin. In fact, he tells us: “all the time he was hunting for this pamphlet, he himself was wearing the pamphlet.” Its text is quite literally absorbed by his texture. In Pierre’s words, “the world overlays and varnishes us.” We “abdicate ourselves, and take unto us another self.”

The most concrete stakes of this decomposition by addition lie with Ahab, who loses his status as the paradigm of forceful agency. Beyond that, however, we can no longer think through surface. To its axis, the world being nothing but superinduced superficies.” Melville, *Pierre*, 67, 84, 285.

15 Philip Armstrong argues that Melville’s whales escape the “false dichotomy between the realms of nature and society,” or break down the human/non-human barrier. And so does Captain Ahab. Armstrong finds that Ahab “simultaneously inhabits the human, technological, and animal domains” such that his madness comes “not from lack but from augmentation” – from these things that are added to “him.” He “fuses his own body with the factory ship he commands, fitting his prosthetic leg into an auger hole in the deck, envisaging his relation to the crew in mechanical terms.” And this need, Armstrong suggests, stems from Ahab’s amputation: “his torn body and gashed soul bled into one another, and so interfusing made him mad.” Ahab’s soul, quite literally, opened and then blended with his material body. Then material forces overrode his rationality. Armstrong’s claim about Ahab’s augmentation and its relationship to a posthuman transgression is incredibly helpful. But it is too limited. The origin of Ahab’s prosthetic augmentation extends beyond his amputation to his environment. Philip Armstrong, “‘Leviathan Is A Skein Of Networks’: Translations Of Nature And Culture In Moby-Dick,” *ELH* 71, no. 4 (2004): 1041-2.

these works in terms of autonomous, rational agents at all. Instead, when we are serious about characters’ relationships to environmental “intrusions,” we end up with an ontology that is most similar to current discussions of Latour's work on actor-network-theory: there is some kind of basic, structural unit, but there are no necessary forms beyond it.\(^{17}\) We might think of this material circulation in terms of water, because its fluctuation is visible. After all in *Moby-Dick* everything gives way to water.\(^{18}\) And in *The Confidence-Man* we find crowds perpetually and “involuntarily submitting to that natural law which ordains dissolution equally to the mass, as in time to the member,” ultimately poured along into “one cosmopolitan and confident tide.”\(^{19}\) But this theory that “everything is water”—a precursor to atomism first articulated by Thales, the “first philosopher”—is purely a heuristic.\(^{20}\) The point is that structural dissolution takes place, but it is always concurrent with fluid and generative, productive dynamics.

Here Melville’s logic of material circulation is no naïve empiricism. Instead Melville repeatedly portrays material bodies—humans included—as collections of “invisible agencies,” like atoms or “subtle agencies,” which are always in flux: constantly and chemically reassembled. This casts Melville as a sort of *speculative materialist*, who posits “material” too small to actually be processed—at least until slow accrual leads to tangible results. As Ahab exclaims on final day

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\(^{17}\) There are differences between Melville and Latour, of course: these relations are less explicit in Melville’s novel than in Latour’s theoretical work. And Melville references Cartesian corpuscles and atoms, while Latour discusses Leibniz’s monads. But in both cases, we find “subjects” described as actors, not as causal agents. They are collections of activity— not “the source of action but the moving target of a vast array of entities swarming toward it.” David Leonard, “The Cartesian Vortex in Moby-Dick,” *American Literature* 51, no. 1 (March 1979): 105-9; Bruno Latour, “Gabriel Tarde and the End of the Social” from Patrick Joyce’s *Social in Question*, New York: Routledge UP, 2002). Bruno Latour, *Reassembling the Social: An Introduction to Actor-network-theory* (Oxford UP, 2005): 46, 5. Here it’s also important to note that this is not Graham Harman’s relations-driven model of Latour.

\(^{18}\) “Then all collapsed, and the great shroud of the sea rolled on as it rolled five thousand years ago.” Melville, *Moby-Dick*, 572

\(^{19}\) Melville, *Confidence-Man*, 9.

\(^{20}\) Branka Arsić makes a similar point about Emerson, who develops: “an astoundingly complex philosophy of leaving,” around the central idea “that man has to be able to find the power to do what he is unable to do: to leave his place.” She adds: “We might think of this in terms of water. It is the force of dissolution, dissolving everything that is made to be stable and habitable,” ultimately turning “flow into a universal ontological and essential principle.” Arsić, *On Leaving: a Reading in Emerson* (Harvard University Press, 2010), 3-5.
of his epic chase: “Would now the wind but had a body; but all the things that most exasperate
and outrage mortal man, all these things are bodiless, but only bodiless as objects, not as agents.”

Or to borrow from Ahab’s most famous declaration: “visible objects” are “pasteboard masks” that
cover the imperceptible and indeterminate.\footnote{Melville, \textit{Moby-Dick}, 420, 301. I will discuss “speculative materialism” in detail in my first chapter.}

Finally, when we consider this model of perpetual reconstitution below the level of human
awareness we can understand Melville’s sense of “characters”—both “persons” and “letters”—
as a series of narrative jackets layered over these invisible dynamic interactions. “Ahab” and
other characters are ultimately unified only in terms of skins, jackets, names, and legal mandates.
And Melville’s “persons” are always collectives held in place by a series of binding \textit{investments}:
a term that connects Melville’s analogically linked jackets, coats of paint, cases, and contracts.

This interaction-based ontology has a clear payoff: dynamic interactions between actors that
precede linguistic categories also precede contracts, legal rulings, and any other governmental
structures—including “democracy” and concomitant notions of autonomous or atomic “agency.”
In short, Melville’s descriptions of perpetual chemical fluctuation undercut any notion of the
stability of physical state and political State that we might hold. Melville’s actants specifically
“expatriate [them]selves to nationalise with the universe,” are “fused into the universe of things,”
and—as I just mentioned—in the aftermath of these expatriations they end up poured along into
“one confident and cosmopolitan tide.”\footnote{Melville, \textit{White-Jacket}, 76. Melville, \textit{Confidence-Man}, 9.} Ultimately this project examines these simultaneous
material and political transitions, tracing the ways that Melville turns to a set of narratives in
nineteenth-century biology, chemistry, geology, meteorology, and physics to resist any
incorporation of these perpetually shifting selves.

For example, Melville begins \textit{White-Jacket} with a “Note”: “My man-of-war experiences and
observations are \textit{incorporated} in the present volume,” as if \textit{White-Jacket} “is” the man of war
united into one “person” by the book jacket that bears his name. In fact \textit{White-Jacket} introduces
“himself” by introducing his jacket: “waterproof it was not,” “no more than a sponge,” so “in a rain-storm I became a universal absorber… Of a damp day, my heartless shipmates even used to stand up against me, so powerful was the capillary attraction between this luckless jacket of mine and all drops of moisture.” Then he declares: “Me? Ah me! Soaked and heavy, what a burden was that jacket to carry about,” such that in climbing aloft, not on but “in my own proper person, did many showers of rain reascend toward the skies, in accordance with the natural laws.”

White-Jacket repeatedly attempts to make that jacket “thoroughly impervious” to the weather by adding coats of black paint. And it’s a total failure. His chemical fluctuation can’t be stopped by ink. He eventually explains that “he” changes forms repeatedly and is unified by nothing but his name, skin, and book jacket: “as a portrait taken at one period of life will not answer for a later stage; much more this jacket of mine, undergoing so many changes, needs to be painted again and again, in order truly to present its actual appearance at any given period.” The white jacket that gives him both his name and his personhood is porous, despite his attempts to secure it with both paint and then with ink. So he’s reassembled—which means, in turn, that he needs to be “repainted.” His identity—and coat—and his white skin—all needs to be secured.

Here Melville’s move to scientific narratives is inextricable from his move to trouble legal and narrative incorporation. (More elegantly: Melville resists written law with “natural laws”). White-Jacket’s fluctuation is clearly linked to the problem of personhood in 1850. His name resonates with “Red-Jacket.” And he repeatedly contrasts his white skin with the possibility of being marked by a whip—made possible by the soon-to-be-outlawed practice of Naval flogging. White-Jacket directly pairs those floggings with practices related to the flogging of slaves, writing “you see a human being, stripped like a slave; scoured worse than a hound. And for what?

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23 Melville, White-Jacket, 4.
24 Melville, White-Jacket, 201.
For things not essentially criminal, but only made so by arbitrary laws. And if this contrast between White-Jacket’s elemental transitions and the degree to which his whiteness is politicized isn’t sufficient as an account that Melville uses him to think seriously about what constitutes a legal “person,” he tellingly exclaims: “but one dab of paint would make a man of a ghost!”

Melville draws on “natural laws” to challenge legal personhood again in his final piece of published prose, The Confidence-Man: His Masquerade. There we find a diverse “crowd”—a “piebald parliament” with “no lack of variety”—that “disintegrated,” “involuntarily submitting to that natural law which ordains dissolution equally to the mass as in time to the member.” That is to say: the “persons” who compose these crowds are also destined to dissolve. And dissolution is a fascinating word choice: solids become liquids and legal entities cease to exist. Quite fittingly, this is the moment Melville’s characters dissolve into “one cosmopolitan and confident tide.”

On the eve of the Dred Scott decision, at the confluence of the Missouri and Mississippi rivers, Melville offers non-persons who operate without legal structures in a text where none of the characters have names.

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26 Melville, White-Jacket, 78. Numerous critics have offered compelling readings of the relationships between “ghosts” and “persons” who are not recognized as such, or who have been denied personhood. Here see, especially, Toni Morrison, Playing in the Dark (Random House, 2007) and Teresa Goddu, Gothic America: Narrative, History, and Nation (Columbia University Press, 1997).


28 Dred Scott’s attempt to be awarded citizenship was thwarted on March 6, and Melville’s book was released on April 1. Even so, Melville was almost certainly aware of the case the year before its publication. Scott v. Sanford reached the Supreme Court docket in 1854, and the New York Daily Times covered the case, repeatedly, in 1856.

29 Instead of names Melville’s text only offers ambiguous physical descriptions or nicknames based on visible performance. For example, the list of potential “confidence men” who might speak for the unnamed “Black Guinea” is as follows: “Oh yes, oh yes, dar is aboard here a werry nice, good ge’man wid a weed, and a ge’man in a gray coat and white tie, what knows all about me; and a ge’man wid a big book, too; and a yarb-doctor; and a ge’man in a yaller west; and a ge’man wid a brass plate; and a ge’man in a violet robe; and a ge’man as is a sodjer.” Melville, Confidence-Man, 13. Largely because of this disconnect between physical characteristics and labels, the central most prevalent critical question about this text is whether there is one confidence man—or as many as seven of them. See, for example, Peter Bellis’ “Melville’s Confidence-Man: An Uncharitable Interpretation,” American Literature 59, no. 4 (December 1, 1987): 551. Finally, this tension between performance and labels is by no means implicit.
As a substantial amount of work has shown, Melville, who once sent a letter from a ship signed “Tawney”—taunting his mother with his tanned and darkened skin—was preoccupied with the relationships between race and legal “persons.” By 1850 this was personal: his father-in-law, Lemuel Shaw, was responsible for enforcing the Fugitive Slave Law in Massachusetts.

Meanwhile Melville was part of the “Young America” movement in the moment its journal, *The Democratic Review*, began its inaugural issue with a sense of what this fantasy of a more “natural” form of social organization might entail. John O’Sullivan offered an account of men as “floating atoms,” who might “distribute and combine themselves” in a “natural process” like “crystallization,” which would yield “a far more perfect and harmonious” union than what “government” could offer.

The bottom line with these atomic collections is that they are interaction-based, not legal or textual. And rejecting stable identities for particular dynamic interactions makes room for what Melville famously offers an exposition on the illusion of “consistent characters” in the work’s fourteenth chapter, when he explains that one of his characters: “may be thought inconsistent,” and in fact “he is.” “But,” Melville asks his readers, “is the author to be blamed?” “Is it not a fact, that, in real life, a consistent character is a rara avis?” “No writer,” Melville reminds us, “has produced such inconsistent characters as nature.” Melville, *Confidence-Man*, 69.

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33 John O’Sullivan offered a fantasy, in the first issue of *The Democratic Review*, that “the floating atoms [men] will distribute and combine themselves, as we see in the beautiful natural process of crystallization, into a far more perfect and harmonious result than if the government, with its ‘fostering hand,’ undertake to disturb, under the plea of directing, the process.” For Melville’s connection to the “Young America” movement, see Edward L. Widmer’s *Young America: The Flowering of Democracy in New York City* (Oxford University Press, 2000), along with the second chapter of Priscilla Wald’s *Constituting Americans: Cultural Anxiety and Narrative Form* (Duke University Press, 1995), which focuses on "literary nationalism."
I describe as Melville’s *local cosmopolitanism*, or his repeated move to privilege moments of contact over contracts. For example, in *Moby-Dick’s* “Knights and Squires” we learn that “men may seem detestable as joint *stock-companies* and nations,” but the “mutual, *joint-stock* world” that Ishmael attributes to Queequeg is utopian, and “the precise situation of every mortal that breathes” is to be “merged,” as by a monkey-rope, in “joint stock companies” of mutual dependence. Here we should carefully note Melville’s shifting hyphen: “joint-stock” wins out over “stock-company,” which serves as the grammatical touchstone for my argument.

This may, of course, seem overstated. Melville, as we know, wasn’t always the most careful of writers. But his resistance to contractual nations is clear as early as his first book, *Typee*, when he offers a vision of utopian Nukuheva (potential cannibalism excluded): “there were none of those thousand sources of irritation that the ingenuity of civilized man has created to mar his own felicity. There were no foreclosures of mortgages, no protested notes, no bills payable.”

“Whether the land of the valley was the *joint* property of its inhabitants, or whether it was parcelled out among a certain number of landed proprietors who allowed everybody to ‘squat’ and ‘poach’ as much as he or she pleased, I never could ascertain. At any rate, musty parchments and title deeds there were none on the island.” Instead of “courts of law or equity” there was

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34 I use the term “local cosmopolitanism” to reference a non-Kantian model that is local and embodied instead of universal. I add the term “local” to distance myself from traditional models of cosmopolitanism, most recently taken up by Anthony Appiah, who suggests that “warring factions will…recognize that the fundamental values held by all human beings will usher in a new era of global understanding” in *Cosmopolitanism: Ethics in a World of Strangers* (New York: Norton, 2007). But this locality is not specific to any locale. I am sympathetic to suggestions like those made by Pheng Cheah, Bruce Robbins, et al. in *Cosmopolitics: thinking and feeling beyond the nation* (Minnesota, 1998): that cosmopolitanism might displace nationalism. My focus is on the relational proximity of embodied persons.


36 For discussions of Melville’s sense of being rushed and pressured by the need for more time—or, perhaps, “Time, Strength, Cash, and Patience”—see, for example, Elizabeth Renker, *Strike through the Mask: Herman Melville and the Scene of Writing* (Baltimore: Johns Hopkins University Press, 1996).
“tacit common-sense law”37 Here Melville simultaneously pressures both rational agents and legal documents, when he embraces “tacit” interactions in a material and political commons.38

Contact is what leads to acceptance and blending, which seems to be what counts. This is why, as John Bryant points out, Melville’s hugs are so important, or why the grasp of hands between Queequeg and Ishmael counts for so much—as it will, again, later in Melville’s work, with Captain Delano and Benito Cereno.39 As White-Jacket points out: “it is quite impossible, I say, to live with five hundred of your fellow-beings, be they who they may, without feeling a common sympathy with them at the time, and ever after cherishing some sort of interest in their welfare.”40 In “The Monkey-Rope,” when he is tied, precariously, to Queequeg—when “for better or for worse, we two, for the time, were wedded… an elongated Siamese ligature united us”—Ishmael describes and universalizes the “dangerous liabilities” (and vulnerabilities) which the “hempen bond” entailed: “my own individuality was now merged in a joint stock company of two… the precise situation of every mortal that breathes; only, in most cases he, one way or other, has this Siamese connexion with a plurality of other mortals.”41

37 Melville, Typee, 126, 201.
38 I discuss this passage—and Melville’s play with joint stock-companies—in my third chapter.
39 Bryant discusses the hug in his introduction to the collection Ungraspable Phantom. See Bryant, John, Mary K. Bercaw Edwards, Timothy Marr, and Melville Society, Ungraspable Phantom: Essays on Moby-Dick, (Kent State University Press, 2006). For the clapping of hands in Moby-Dick, see “A Squeeze of the Hand” (322). In “Benito Cereno” see the moment just before the deposition, when “Don Benito would not let go the hand of Captain Delano, but retained it in his, across the black's body” before leaping into his ship” (97). Finally, with regard to this question of “contact” on a larger scale we also turn to Ahab’s increasingly close contact with Pip, who offers himself as a prosthetic leg: arguably an attempt at the reconstitution of both Ahab’s body and the body politic. See Sharon Cameron’s “Ahab and Pip: Those Are Pearls That Were His Eyes,” ELH 48, no. 3 (1981) and Donald Pease’s “Pip, Moby-Dick, Melville’s Governmentality.” Novel 45, no. 3 (September 21, 2012): 327–342.
41 Melville, Moby-Dick, 320.
In short, this “contact” model ultimately enables Melville’s radical, local (or non-Kantian) cosmopolitanism. It moves us away from Locke’s contractual model, since it will not posit autonomous agents. Instead, again, “we expatriate ourselves to nationalise with the universe.” The line, here, seems to be that to produce and be a part of a universal population, we must renounce our current citizenship, or to break from any model of “We, the people” that presupposes a collection of rational atoms that compose a nation in some strictly additive way. Obviously this follows from the dissolution of the bodies of supposedly autonomous agents and from their fusion into a “universe of things.” And here Melville shifts the common denominator of participation to a lower (or, as a philosopher might say, an even more “primitive”) level. In Melville’s terms, we “level downward.” And we can also imagine this political shift in an environmental frame: here Melville resists the problems of “nation” not with the amplification of the “transnational” but through an attempt to escape it for shared water, air, and other elements—a familiar reading now, and a different sort of “global.”

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While I don’t wish to advance Melville as a candidate for “Great American Author” and am wary of the baggage that description would entail, I do believe that here Melville offers a kind of argument that was unique in his moment and which is relevant in ours. Branka Arsić beautifully portrays Emerson as a thinker who develops “an astoundingly complex philosophy of leaving,”

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42 Melville, *Moby-Dick*, 76.

43 For powerful discussions of the construction, “We, the people,” see Priscilla Wald’s *Constituting Americans: Cultural Anxiety and Narrative Form* (Durham: Duke University Press, 1995) and Christopher Looby’s *Voicing America: Language, Literary Form, and the Origins of the United States* (Chicago: University of Chicago Press, 1998), along with countless discussions of “imagined communities.”

44 Melville explains, in *White-Jacket*: “That saying about leveling upward, and not downward, may seem very fine to those who can not see its self-involved absurdity. But the truth is, that, to gain the true level, in some things, we must cut downward; for how can you make every sailor a commodore? or how raise the valleys, without filling them up with the superfluous tops of the hills? Some discreet, but democratic, legislation in this matter is much to be desired.” Melville, *White-Jacket*, 166.
and she suggests—as I do with Melville—that “we might think of this in terms of water. It is the force of dissolution, dissolving everything that is made to be stable and habitable.” In fact, Arsić explains, Emerson “went on to turn flow into a universal ontological and essential principle.” Arsić’s readings are, ultimately, guided by the “question: what does it really mean to hold that everything fluctuates, and, being relational, changes its identity? What does it mean for a person, for instance, to live his life in the mode of water?” Melville, I argue, has similar questions. But for Melville, this is not a matter of “existential and ethical insistence” or some singular man striving to “find the power to do what he is unable to do: to leave his place.” Instead, for Melville, “you” are always fluctuating at levels that are beneath the level of your awareness.

(Melville’s most memorable depiction of leaving, after all—Ishmael’s escape to the “watery part of the world”—is also his “substitute for pistol and ball.” And this life-saving process is about material processes: “regulating the circulation” amidst a “drizzly November in [his] soul”).

This attempt to represent “literal” material bodies—with flesh and blood and circulation—also distinguishes Melville from Whitman. Peter Coviello compellingly describes Whitman as the poet of attachment, equally committed to fusion and to “Union.” But Coviello describes this as attachment specifically to—or intimacy with—“someone you haven’t met,” which clearly references an imaginary. Put another way, here “attachment” is a conceptual metaphor.

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47 Peter Coviello, “Intimate Nationality: Anonymity and Attachment in Whitman,” *American Literature* 73, no. 1 (March 2001): 85. Coviello begins: “Is it possible to be intimate with someone you haven’t met?” Then he explains that “virtually every strand of Whitman’s utopian thought devolves upon, and is anchored by, an unwavering belief in the capacity of strangers to recognize, desire, and be intimate with one another.” And these strands ultimately all “circle back to a quality of intimate affection he promises to extend to an entire nation of readers who are, to him, perfectly unknown.” His figures are abstract, and his imagined audience is abstract—and yet, instead of engaging with an attempt to represent “literal” material bodies mimbetically, Whitman aims to use abstract tropes in ways that might engage actual material bodies. As Coviello points out, in the 1876 preface to *Leaves of Grass*, Whitman explains: “I also sent out ‘Leaves of Grass’ to arouse and set flowing in men’s and women’s hearts, young and old, endless streams of living, pulsating love and friendship, directly from them to myself, now and ever.” One road not taken in this project was a consideration of this different brand of materialism. In short, the suggestion that Melville deals with material circulations more “literally” and “materially” than other authors raises the fascinating question, what’s more “literal” or more “material”: representation of atoms in texts (especially when atoms
Melville, conversely, begins with an ontological assumption that *we are fused together*. And when we take fusion as our starting point, particular interactions are what matter. Put directly, Melville’s goal isn’t to create Union, or some stable polity; instead he deals with relations *within a common world*.

Finally, Poe also thinks seriously about “persons” as atoms that are constantly reassembled in a way that relates to political structures. This reaches its peak in his scientific poem, *Eureka*, which has been described as offering a “Poetics of Constitution.” But as Matthew Taylor explains in his remarkable work on Poe’s “prehistory of the posthuman,” Poe’s dissolution of selves is ultimately portrayed as a “self-gratifying transformation” back into a pure spiritual state that was allegedly its origin. This move beyond material *amplifies* the self and makes it something more than human. Meanwhile Whitman shares Poe’s focus on expansion, offering what might be described as a logic of consumption: “I celebrate myself,” “I contain multitudes,” and now I’m stopped “waiting for you.” But Melville’s interactions don’t imagine *resolution*. In fact, in response to fantasies of capture or completion, Melville offers *circulation* in a kind of material commons.

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48 Lakoff and Johnson present the idea of the “conceptual metaphor,” or the idea that concepts are derived from actual sensorimotor experience, in *Philosophy in the Flesh*. For example, “categories are containers.”


51 These first and last lines of Whitman’s “Song of Myself” seem to highlight this logic of consumption. *Leaves of Grass and Other Writings: Authoritative Texts, Other Poetry and Prose, Criticism* (New York: Norton, 2002).
Even so the real question is whether we gain anything from this conceptual gesture against the idea of legal personhood by an author who only passively resisted his own father-in-law’s enforcement of the Fugitive Slave Law with his fiction. We might also wonder whether there is any real reason to celebrate what seems to be a libertarian fantasy of political self-organization. But if our evaluative measure of literary success is political effect then we should remember that “Bartleby, the Scrivener: A Story of Wall Street” was read aloud as part of Occupy Wall Street. Melville’s interest in a kind of micropolitics has had a real effect on contemporary political life, even if his utopian sense of hope has failed. This argument also offers new ways of working through the two central critical problems facing nineteenth-century Americanists in our moment: how to navigate the increasingly and problematically polarized division between work on “race” and “the environment” and how to respond to the shifting relationships between literature and science in an increasingly neoliberal academic world. And, of course, for readers who are more compelled by new biographical and historical context, along with new readings of Melville this project is thoroughly steeped in both.

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Methodology; or, Where to Travel

Much of the work that focuses on literature and science gets pulled between using literature as a mediator of “facts” about the history of science, making formalist claims about literary work, and using that work as an intermediary for discussions about current matters of concern. Sometimes, here, the idea is that an author was “right” (e.g. *Proust was a Neuroscientist*). Other times, the literature seems to be used as a prehistory that somehow bolsters the integrity of science or provides some sort of cultural capital. This project, conversely, is serious about demarcating between formalist claims, possible conditions of possibility for those claims (i.e. “context”), and the ostensibly future-oriented application of arguments that are ultimately based in the text.

Inspired by calls for New Formalism, I’m also interested in considering Marjorie Levinson’s suggestion that we should shift from viewing literary art as nothing but “bundles of historical and cultural content” by returning to the sort of “dynamic formalism” that insists on “the unique interdetermination of form and content for every work studied.” My topic is Melville’s commitment to considering the material circulations and processes that construct actors, or his dynamic enactments of “decomposition by addition.” And one piece of my argument is that Melville’s *texts* are built to encourage the same sorts of generation. Meanwhile, even as I’m offering “historical context” or biographical accounts, I am offering a series of potential conditions for the possibility of Melville’s ontology. I am not making claims about causation, adjudicating between different strands that led to these texts’ complex production, or allowing “context” to overrun the formal elements of these texts.

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I begin with this formalist argument about “Melville’s Ontology.” Then I contextualize my claim that Melville’s actors “leak,” treating it as a mediator of both biographical readings and nineteenth-century discussions of material, cognitive, and legal narratives. To do this I trace the ways that Melville decomposes and distributes “agency” at the level of material bodies, human cognition, and social collectives. In many ways this structure is inspired by and reminiscent of Branka Arsić’s *Passive Constitutions: 7½ Times Bartleby*, where each chapter offers “a reading of a different type of passivity and/or depersonalization.” But in Arsić’s’ words, her “book is antithetical. Its chapters contradict or even negate one another, and often by reading the same paragraphs of the story.” Here, conversely, three separate ways of contextualizing or historicizing work together in complementary, convergent, but scalable ways to thicken my formalist claim that Melville’s subjects “leak,” or are dynamic and distributed.

My first chapter traces Melville’s representations of perpetual “Material Circulations,” which shape his textual representations of humans. I begin by describing the way that Melville decomposes human bodies by adding things to them, and in his most extreme moments, they undergo phase changes (solid, liquid, gas) in response to electromagnetic and atmospheric forces (magnets, lightning, thunderbolts). Then after accounts of the way that White-Jacket carries showers of rain “in his own proper person” and Ahab is described as accumulating fiery emotion “within the Leyden jar of his own magnetic life” I argue that Melville’s humans always leak, or find themselves permeated by “subtle agencies” that are external to them. I describe this radical openness as a kind of connection by way of dislocation. Then I ground that logic in both work on electromagnetism (i.e. the ways that people experienced shocking one another in electric chains) and discussions of atomism (i.e. a kind of perpetual atomic exchange between agents or actors that are never discrete). I focus on Ahab because he is generally seen as such a remarkably strong,

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55 Branka Arsić, *Passive Constitutions, or, 7 1/2 Times Bartleby* (Stanford University Press, 2007), 10. It’s worth noting that in her more recent, *On Leaving: A Reading in Emerson*, her work does take this form.

controlling, agent. And in the process I offer detailed accounts of Ahab as a Leyden jar, his infamous doubloon as part of an experiment in the new field of Electrical Biology, and the development of both “Human Electricity” and “Atmospheric Electricity.” This reading culminates in the description of Melville’s ultimate moment of circulation: the famous circling vortex at the end of *Moby-Dick*, which is cast in the language of nineteenth-century hurricanes.

After contextualizing this interest in material circulation I conclude by turning to the question: what are these subtle agencies? Or: what circulates? This becomes a crucial question in a chapter that discusses Melville’s interest in invisible materials that include atoms, charge, snowflakes, sediment, and “the impalpable air.” I claim that Melville intentionally blends models as different as Lucretius’ atomism, Descartes’ corpuscles, and contemporary chemical atomism. And ultimately his interest is in their shared status as “imponderable” or “invisible” “substance.” I conclude by explaining that in mapping impalpable but quite powerful “material circulations,” Melville draws out an important element of thought developed by theorists like Bruno Latour and Alfred North Whitehead: the idea that causation always takes place on multiple levels below the threshold of our conscious awareness. And we can only ever “know” those “subtle agencies” through speculation. This turn to “speculative materialism” gives us a way to finally make sense of the first pages of *Moby-Dick*, from the silent “letter H” that drives the “Etymology” to the whales that somehow “floated” into his “inmost soul,” released by the “flood-gates” of Melville’s “wonder-world.” Ultimately this chapter on “Material Circulations” contextualizes and situates the connection between atoms, electricity, wind, and Melville’s whales: all interconnected, invisible agents behind the “visible objects” that serve as Ahab’s “pasteboard masks.”

The secondary idea that frames this chapter is the importance of responding to Melville’s work without assuming that his materialist references are always *metaphors*. Instead I take his claim that even the “fieriest emotions of life” are ultimately “lost in the mid-regions of the impalpable air” seriously, describing the ways that both atoms and charge are represented as perpetually reassembling and reconstituting Melville’s humans.
While my first chapter considers a kind of “flat ontology,” or the perpetual circulation of atoms, my second chapter responds to the question: how do these assemblies become visible or have duration? The short answer, I argue, is structure. “Cognitive Distributions,” explains that in the very moment that organic chemistry took shape, Melville wrestled with the possibility that “life” emerges from material structures and not some sort of vital force. This yields a generative, emergent, or bottom-up construction of cognition and “identity.” And Melville even goes so far as to repeatedly portray “souls” as collections of material entities, like hives or swarms of insects.

I begin with Melville’s turn to Benjamin Rush’s understanding of somnambulism and reverie, which suggests that the body can function while the mind is “absent.” This model, I explain, frames consciousness as the product of “emergence” or a kind of scaffolding. Then I situate Melville’s “decomposition by addition”—or changes to identity that focus on what is generated instead of what is lost—at the level of “organized structures”: not atoms circulating in a vortex but the things that are actually built up—like “life” and “cognition.” And I do this by turning to three possible conditions of possibility for Melville’s way of thinking: Darwin and coral insects that Melville describes as “weaver-gods,” Lyell and a sort of geological mode of thinking in terms of layers, and the beginnings of organic chemistry, or consideration of “life” as something that’s based in what chemists described as “organized structures” instead of vital force. I conclude with a reading of Melville’s final short story: “The Apple-Tree Table.” It brings us to this chapter’s conclusion: in the moment of the development of organic chemistry—and materialist ways of thinking about humans—Melville doesn’t commit to a structuralist model, but he wrestles with it very actively.

Here my concern is ultimately about the question of self-organization, or about how—if Melville imagines an “ontology” that is ultimately about flux, or if everything circulates—we can ever have any “thing” at all—much less something as advanced as human cognition or the soul. The secondary goal of this chapter is to develop an historical claim: Melville wasn’t just a “genius” whose work serves as a remarkable precursor to ideas that we find in theory today.
Instead the idea of “emergence” was *made possible by developments in chemistry*, along with geology, in the 1830s and 40s—as Melville was avidly reading it and developing the lines of thought that we see throughout his work.

Finally, my third chapter on “Social Collectives” suggests that Melville’s “persons” are always collectives that are held in place by a series of analogically linked “cases,” or binding *investments*: a term that ultimately links his jackets, coats of paint, names, cases, and contracts. Here Melville responds to debates about what constitutes a “person” by insisting that the category is ultimately a *legal construction*. He obsessively pushes against the use of written formulations as ground for claims about ontology, rejecting legally established “joint stock-companies” for a kind of naturalized democracy, or “joint-stock companies.” (Companies,” in the social sense, always win out over corporations). Here we find people “involuntarily submitting” to a kind of “natural law,” which ultimately pours them into “one *cosmopolitan* and *confident* tide.”

And these groups also have the capacity to *self-organize*, like the emergent living creatures that I discussed in my last chapter—but without racist distinctions between persons and property.

This third chapter also offers a story about *language*. Melville draws on a set of scientific narratives because they give him a way to think differently. Science helps Melville resist names, labels, and laws—or any other incorporation of his perpetually shifting selves. So Melville’s cases are always exceeded thanks to the leaks that are inherent in a world of material circulation. But those “cases” also serve as “dead letters,” which have a real effect through the readers that interpret them, bringing them to *life*. To quickly borrow a strand from *Moby-Dick*—and from my project’s introduction—meaning is less a thing that can be held than a process of “looming.” Living readers weave on words that serve as textual skeletons. And this is the second kind of “material circulation” that matters for Melville. Put directly: Melville’s *literary circulations* serve the same purpose as any *material circulations: they resist the Law*.

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This line of argument may seem unnecessarily complex and obscure. And it works against traditional ways of interpreting identity, cognition, politics, and ethics. But if anything, this defamiliarization should call for an increase of attention. And whether it engages us or, more likely, occasions our frustration, I have two very tangible reasons—beyond leaks—for focusing on Melville’s decomposition and distribution of “agency.” First, we run into explicit claims that action is determined again and again, as we move through Melville’s corpus. Then we ignore them. For example, at the conclusion of “Loomings,” Ishmael explains, following Charles Brockden Brown’s introduction to *Edgar Huntly*, if not Francis Hutcheson:

Though I cannot tell why it was exactly that those stage managers, the Fates, put me down for this shabby part... now that I recall all the circumstances, I think I can see a little into the *springs and motives* which being cunningly presented to me under various disguises, induced me to set about performing the part I did, besides *cajoling* me into the delusion that it was a choice resulting from my own unbiased freewill and discriminating judgment.\(^{59}\)

And near the end of the tale, Ahab, our “strong agent” rants: “‘Ahab is for ever Ahab, man. This whole act's immutably decreed…. ‘Fool! I am the Fates' lieutenant; I act under orders.’”

These are not isolated incidents. But even so, no critic seems to have taken these deterministic statements seriously, at least outside the realm of religious debates, or in terms of materialism.

Second, and relatedly, critics tend to ignore the influence of materialist elements in these texts. For example, while Ahab’s role as “‘the Fates’ lieutenant’” might not seem to merit a materialist reading, Melville, seemingly inspired by Darwin’s *Voyage of the Beagle*, continues: “‘Ahab’s *soul’s a centipede* that moves upon a hundred legs. I feel strained, half stranded, as ropes that tow

\(^{59}\) Melville, *Moby-Dick*, 22. Brown writes, in his preface to *Edgar Huntly*, that: “America has opened new views to the naturalist and the politician, but has seldom furnished themes to the moral painter. That new springs of action, and new motives to curiosity should operate that the field of investigation” in the new nation, with new land, “may be readily conceived.” And Edward Cahill explains, in “An Adventurous and Lawless Fancy: Charles Brockden Brown's Aesthetic State,” *Early American Literature* 36, no. 1 (2001): 34, Brown finds “metaphorical expression in what he calls the ‘springs of action,’ the quasi-scientific, structural metaphor for the origin of motives and desires, whose investigation and understanding is the explicit aim of his novels,” based in Francis Hutcheson’s *An Inquiry into the Original of our Ideas of Beauty and Virtue*, which offered “springs” that were both explicit explicitly vehicles of neoplatonic aesthetic experience and implicitly physical “instructions” to the body, similar in form and function to the nervous system.
dismasted frigates in a gale; and I may look so. But ere I break, ye’ll hear me crack; and till ye hear that, know that Ahab’s hawser tows his purpose yet!” This “centipede” is, quite tellingly, a reference to both insect and rope; swarm and spinal cord. And as I explain in my second chapter, this reference brings us directly into conversations about materialist psychology. The question, of course, is where this kind of attention to Melville’s emphasis on science might take us.

Readings of Moby-Dick as a text that is ultimately about power or ideology simply don’t hold when we look at Melville’s work. References to materialism are ubiquitous in Melville’s texts. And the strongest case I can possibly make for really considering Melville’s engagement with “science” involves asking you to turn to Moby-Dick’s final scene. Here I have a simple question: doesn’t the text end with a vortex? Put another way, when “concentric circles seized the lone boat itself, and all its crew, and each floating oar, and every lance-pole, and spinning, animate and inanimate, all round and round in one vortex, carried the smallest chip of the Pequod out of sight,” can you find a cause—other than spinning? Or, if you believe that something about Ahab leads to the death of his crew: do you actually mean to suggest that his will caused this vortex? While I do realize that fiction requires a suspension of belief, it is telling that for professional critics this all-consuming vortex often seems to be an afterthought: a mere effect of Ahab’s will. I would like, instead, to give some credit to the vortex.

Here I don’t intend to claim that Melville’s texts are “about” science and not politics. In fact, as I discuss in my first chapter, this vortex is cast in the rhetoric of nineteenth-century hurricanes. So it leads us to questions that are unavoidably political in our moment (e.g. whether it makes a

60 Melville, Moby-Dick, 426.

61 Melville, Moby-Dick, 418. Darwin’s Voyage of the Beagle begins with a declaration of “Insects the first Colonists of Islands,” and these insects are at the heart of Darwin’s first monograph: The Structure and Distribution of Coral Reefs (Smith, Elder and Company, 1842). The Oxford English Dictionary also indicates that “centipede” was also a strong piece of rope running the length of the boom, which seems to reference the spinal cord: especially given the prophecy that Ahab will be killed by hemp. Finally, it’s also worth noting that this trend to ignore or overlook Melville’s materialist psychology is beginning to change. Jennifer Fleissner and Jonathan Schroeder are currently at work on projects that aim to describe Melville’s relationship to a set of nervous disorders, like monomania, which were known as “maladies of the will.”
difference to really think about the weather). In turning to meteorology to open *Moby-Dick*'s “frame” beyond “Cold War” readings of “Ahab,” I am certainly not finding something on the “surface” of Melville’s text. Instead I am arguably putting a twenty-first-century spin on “political” readings of Melville. After all—as I describe in my first chapter—here we find Ishmael as the victim of a hurricane, who speaks to us, in “Loomings,” from a place of trauma—as someone who survived for days, floating on a coffin after a major storm.

I have made an atypical choice—at least for literary criticism—to privilege certain brands of “science” over other narratives. One reason for my selection is that despite the sort of dizzying change that led Andrew Delbanco to begin *Melville: His World and Work* with a stunning reminder of the rapid technological shifts of Melville’s lifetime—oil lamps to electric lights, messengers to telegraphs—the only book on this topic is Richard Dean Smith’s *Melville’s Science: Devilish Tantalization of the Gods*! Clearly a number of monographs, from the careful engagement with pseudoscience in Samuel Otter’s *Melville’s Anatomies* to the remarkable collection of references in Branka Arsić’s *Passive Constitutions*, speak to “science” in different ways. And a number of recent essays have begun to develop this topic. But these texts are ultimately not careful meditations on Melville’s positive, historically grounded engagements with the branches of science that seemed to matter to him at the time.

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62 I do intend to express skepticism about the idea of “surface reading.” My suggestion is that even when phrases are “on the surface” we need lines of inquiry and professional scaffolding to make them legible.


Melville was a student in Joseph Henry’s class the year he modeled the very first prototype of a telegraph machine. He wrote his books staring out his study window toward the first private meteorological observatory in the United States, which was on Mt. Greylock. And he shared an editor, John Murray III, with both Charles Darwin and Lyell. Melville read Darwin’s work when it was still in journal form—after his own trip to the Galápagos aboard a whaling ship, where he learned more about weather, navigation, and charts. And in this light it’s less surprising that Melville developed an ecological orientation that a book on his shelf described as *The Chemistry of Common Life.* Instead of considering *The World Without Us*, Melville attempted to process experience at the level of every interaction instead of on a longer scale.

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65 I discuss this relationship in detail in Meredith Farmer, “Herman Melville and Joseph Henry at the Albany Academy; or, Melville’s Education in Mathematics and Science,” *Leviathan* 18, no. 2 (2016): 4–28, which offers new biographical material related to Melville’s education in science. For people unfamiliar with Joseph Henry: he became the first Secretary of the Smithsonian Institute, and his work was famous enough that the unit of inductance is named “the henry” after him. Charles Weiner offers a concise account of his accomplishments: “During his six years as a teacher at the Academy [1826-1832], Henry’s research accomplishments included the following: he transformed the electromagnet from a lecture reemployed to a powerful instrument capable lifting more than 2000 pounds; he determined the relations between series and parallel circuits; he constructed the first commutating electromagnetic motor and the first electromagnetic telegraph with an audible signal; and, most importantly, he discovered electromagnetic induction, independently paralleling the work of Michael Faraday.” See Weiner, Charles. “Joseph Henry and the Relations between Teaching and Research.” *American Journal of Physics* 34.12 (1966): 1093.

66 In 1840 the Meteorological Association of Williams College (i.e. the weather club) constructed the first private “observatory” in the nation. It was on Mt. Greylock, within walking distance of Arrowhead, Melville’s home in the Berkshires. This erection of a 50-foot tower with a wind-vane on top of the highest mountain in the state would have been striking. And Melville could have learned about the project from the *Berkshire County Whig.* “Meteorological Observations and Researches. At Williams College” *Berkshire County Whig*, 25 Nov. 1841, 3; “Old Wooden Observatory on Greylock,” *Berkshire Hills*, July 1903, 157.

67 John Murray III published the second edition of Darwin’s *Journal of Researches* (1845) as part of the Home and Colonial Library just before Melville’s *Typee* (1846) and *Omoo* (1847) became part of the same series. They were Volumes 12, 15, and 22, respectively, and their advertised titles were *Darwin’s Voyage of a Naturalist, The Marquesas Islands, and The South Seas* (London: John Murray, 1847).


70 Alan Weisman’s bestselling *The World Without Us* (New York: St. Martin’s Press, 2008) is a thought experiment that attempts to imagine the long-term effects of a world without – and after – humans.
This is a story that hasn’t been told. In fact, Melville’s relationship to scientific narratives hasn’t only been overlooked. It seems to have been written out of history. For example, in his two-volume, 2000-page *Herman Melville: A Biography* (2002)—a leviathan in its own right—Hershel Parker only offers one sentence about Melville’s relationship with Joseph Henry:

“Herman took an arithmetic class under the care of Professor Henry and for the second time in his life surprised everyone by doing extremely well.” But despite describing this moment as surprising and influential, Parker doesn’t offer any information about who Joseph Henry is, despite his role as the other most famous figure to emerge from Albany at the time.71 Laurie Robertson-Lorant never mentions Henry in her 700-page *Melville: A Biography* (1996). She quickly mentions that “Herman won ‘first best’ in his class on the mathematics examination”—but immediately turns to the fact that the book he received as a prize, *The London Carcanet*, “ignited a spark of poetry in his soul and played the role of go-between in several adolescent flirtations.”72 What’s especially interesting about these omissions is that they are exactly that. Melville’s relationship with Henry did receive at least quick mentions in print before 1951.73 So while biographies expanded exponentially, the topic disappeared.

Obviously this raises questions: why have these stories about science fallen by the wayside? Why were they not even worthy of a footnote? Andrew Delbanco, as I mentioned, even begins his thematic biography—*Melville: His World and Work* (2005)—with a compelling gesture that makes scientific developments central to Melville’s own development:


73 In 1951 William Gilman explained, describing the Albany Academy: “Most famous of the faculty was Joseph Henry, whose invention of the electromagnet in 1829 laid the foundation for Morse’s telegraph three years later. His mile-long circuit of wire, by which he proved that electric power could activate a magnet or ring a bell at a great distance, was ranged around the walls of an upper room for all the students to see.” In the same year, Jay Leyda’s *Melville Log*, references “lectures and experiments in chemistry.” Raymond Weaver also mentioned these experiments in the first full-length biography of Melville in 1921. See William Gilman, *Melville’s Early Life and Redburn* (New York University Press, 1951), 52; Jay Leyda, *The Melville Log* (Gordian Press, 1969), 46; Raymond Weaver, *Herman Melville, Mariner and Mystic* (Doran, 1921), 71; and Farmer, “Herman Melville and Joseph Henry at the Albany Academy,” 4–6.
When Melville was born in 1819 in New York City, it was a town of about a hundred thousand people with streets lit by oil lamps as if by so many lightning bugs. The best way of sending a message was via a wax-sealed letter carried by a messenger on a horse... By the time he died in New York in 1891... the Brooklyn Bridge was carrying traffic, as was the Second Avenue Elevated Railway, and the city was forested by so many telegraph, telephone, and electricity poles that live wires falling into the street were a hazard of urban life.\(^{74}\)

But after this auspicious beginning, the topic disappears.

I begin with a prefatory biographical chapter, which gives a detailed sense of the stunning amount of material that we begin to find when we pay attention to Melville’s engagement with what we now describe as “STEM” fields. Here my goal is not to offer material that can be used to develop causal accounts about the specific ways that Melville’s education “may have influenced” his writing. Instead my goal is to express the magnitude of this exclusion in ways that set the stage for the importance of allowing for readings that engage with “science,” very broadly construed. This is important not despite the fact that these readings have been almost completely excluded from the critical archives since 1953—but exactly because this means readings of Melville and science show us exactly how much critics have either missed, ignored, or excluded. This collective omission was a visible trend until Samuel Otter’s Melville’s Anatomies (1999) made pseudoscience important for understanding Melville’s treatment of racial science: a topic that arguably authorized its reintegration. As I suggested with my reference to hurricanes—and as quite a bit of forthcoming work makes clear—“the environment” has begun to serve a kind of authorizing function as well. It is very clearly making Melville’s engagement with science critically visible and useful in ways that are bringing us back to the lines of inquiry where Tyrus Hillway, Elizabeth Foster, and others left off in the 1940s.\(^{75}\)

In general the history of nineteenth-century science has been strangely undertheorized.\(^{76}\)

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\(^{75}\) See, for example, Geoffrey Sanborn’s “Melville and the Nonhuman,” along with forthcoming work by Jason Bell, Dana Luciano, and Michelle Neely and contributors to the *Rethinking Ahab* collection.

\(^{76}\) Recent work, like Daston and Galison’s *Objectivity* (Cambridge: MIT 2007), has begun to fill this gap. But this is still especially true of the history of U.S. science. Literary criticism like Stephen Meyer’s
And this neglect of an entire set of unavoidably relevant discourses is too substantial to be something that literary critics have simply overlooked. We might even surmise that science has been abjected by literary critics. After all, “science”—by no means a static type or natural kind—is often viewed as having pretensions to timelessness or objectivity that set it against historicism. The narratives I draw on also challenge most notions of “identity” and “subjectivity” in ways that trouble two categories many critics understandably hold dear: “identity politics” and “freedom.” So these narratives may seem to threaten not only a major pillar of the field’s perceived political effect but also the possibility of having any politics at all.

This is, of course, the perpetual debate surrounding work on systems, networks, or current discussions of posthumanism. But fantasies related to rational discourse and abstract equality cannot ground or justify critical refusal to discuss alternative conceptions of ontology. On humanist grounds, new models of ontology are potentially generative. Cary Wolfe even points out that systems theory offers a model that ultimately makes pluralism possible, if not requisite.77 Systems are all “blind” about their own processing, so they need other observers to understand their own filtering processes, or the way they separate information from noise. Beyond that, while

Irresistible Dictation, Gertrude Stein and the Correlations of Writing and Science (Stanford University Press 2003), Paul Gilmore’s Aesthetic Materialism: Electricity and American Romanticism (Stanford University Press, 2009), and Jane Thrailkill’s Affecting Fictions: Mind, Body, and Emotion in American Literary Pragmatism have arguably done even more to give us a view of this landscape than historians of science.

77 The foundation of the systems model is a distinction: there’s a system, and there's noise. Each system can only read through its own filtering mechanisms or processes. So it only has what it appropriates. Everything else is necessarily imperceptible. One corollary of this model is an insistence that all observations are contingent, which is to say, they could have been different for another system. And a second corollary is that a system can never read itself or its own processes, or its distinctions. That requires what Luhmann describes as “second-order observation” — or the presence of another (imperfect, incomplete) observing system. For Wolfe, this idea of second-order observation offers a way to resolve debates about realism and idealism: “‘everything that is said is said by someone,’” and “all such assertions are based on a ‘blind spot’ of paradoxical distinction that not the observer in question, but only other observers, can disclose.” “Self-critical reflection is thus, strictly speaking, impossible, and must instead be distributed in the social field.” To follow “the problem of contingency” “through to its conclusion” requires a “‘plurality’ of observers.” Thus, on Wolfe’s account, Luhmann derives “the necessity of the observations of others, thus installing the epistemological conditions of possibility for an incipient pluralism.” See Cary Wolfe’s Critical Environments: Postmodern Theory and the Pragmatics of the “Outside” (Minnesota: U of Minnesota Press, 1998): xviii, xi
this insular intersubjectivity isn’t explicitly “political,” it also isn’t as different from other models as its detractors might believe. For example, one might suggest that psychoanalysis is also about looking at our structures with some hope that analysis of our non-conscious reactions might be “helpful,” whatever that may mean. Beyond that, however, it also seems well worth the effort to consider “ethics” and “politics” in ways that are unfamiliar instead of immediately discounting unsettling alternatives out of hand. So I am interested in the possibility of situating Melville in the wake of Darwin, or as a source and prehistory for a different sort of politics and a different sort of criticism—not suspicious critique but synthetic creation.
From Analysis to Synthesis

In *Critical Inquiry* in 2004, Bruno Latour posed the question “Why Has Critique Run Out of Steam?” He deftly and compellingly portrays the workings of the critique machine, explaining that it resembles conspiracy theory. “In both cases, you have to learn to become suspicious of everything people say because of course we all know that they live in the thralls of a complete *illusio* of their real motives.” In fact, Latour explains, we can summarize about ninety percent of the contemporary critical scene with one pattern: critics undermine a “fairy position” from their “fact position.” The “courageous critic” analyzes others’ alleged fetishes and reveals them as nothing but projections of the broader social forces that the critic holds dear: “society, domination, whatever.” The first problem Latour identifies is a lack of symmetry. The critic’s own “pet facts” are tellingly mobilized as indisputable, despite their own unexamined origins. The second problem is “critical barbarity.” This uncharitable “debunking,” best cast in the rhetoric of war, is quite pleasurable: “Do you see now why it feels so good to be a critical mind?” “You are always right!”

These suggestions have been embraced and extended by literary critics looking for something

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81 Latour, “Why Has Critique Run Out of Steam? 238-39. Brief quotations simply can’t capture the strength or affect of Latour’s arguably canonical essay. He explains: “The courageous critic, who alone remains aware and attentive, who never sleeps, turns those false objects into fetishes that are supposed to be nothing but mere empty white screens on which is projected the power of society, domination, whatever. The naive believer has received a first salvo. But, wait, a second salvo is in the offing, and this time it comes from the fact pole. This time it is the poor bloke, again taken aback, whose behavior is now “explained” by the powerful effects of indisputable matters of fact: ‘You, ordinary fetishists, believe you are free but, in reality, you are acted on by forces you are not conscious of. Look at them, look, you blind idiot’... Do you see now why it feels so good to be a critical mind? Why critique, this most ambiguous pharmakon, has become such a potent euphoric drug? You are always right!
“beyond critique” and “after the hermeneutics of suspicion.” For example, Rita Felski redescribes “suspicion” in terms of the pleasure it offers, ultimately questioning the motives of a common “conviction that the most rigorous reading is one that is performed against the grain, that the primary rationale for reading a text is to critique it by underscoring what it does not know and cannot understand.” And a number of other essays, special issues, and panels have taken up this move to question suspicious detection. Examples include Stephen Best and Sharon Marcus’ “Surface Reading”—an introduction to a special issue of Representations that deals with the aftermath of symptomatic reading—and Heather Love’s “Close but not Deep: Literary Ethics and the Descriptive Turn,” both of which engage with Latour’s essay directly.

82 Here a note on disciplinary relationships seems important: despite this essay’s placement in Critical Inquiry and the ways that it has been mobilized, it’s clear that Latour’s work is not ultimately about literary criticism – or even critique in the ways literary critics might use the term. As the emphasis on “symmetry” – along with the debates surrounding David Bloor’s essay, “Anti-Latour” (1999), remind us – Latour is responding to the so-called strong programme or the sociology of scientific knowledge (SSK). This is about debates within the sociology of science and the very idea that sociologists question scientific facts as constructed by mobilizing their own allegedly factual “social forces.” This is to say: Latour’s comments may not apply to all of the things literary critics value as “critique.”

83 Felski, Rita, “Suspicious Minds,” Poetics Today 32.2 (2011): 215-220. Felski also memorably transforms Latour’s conspiracy theorists into detectives: “the critic, like the detective, refuses to take surface meanings at face value; the text, like the criminal suspect, must be scrutinized, interrogated, and made to yield its hidden secrets. Both also rely on the double plot: the classic detective novel telling the story of a crime via the story of its investigation and the literary critic also attempting to track down and bring to light obscured patterns of causality—in this context, the social forces that underpin and motivate the symptomatic tensions and contradictions of the literary text.”

84 Related topics are also raised in Christopher Castiglia’s “Critiquiness,” forthcoming in ELN, Wai Chee Dimock’s “Genres as Fields of Knowledge,” PMLA 122 (October 2007): 1377–88, Katherine Hayles’ work on distant or machine reading, discussed in “How We Read: Close, Hyper, Machine,” ADE Bulletin, 2010, 62–79, and Eve Sedgwick’s work on “Paranoid Reading and Reparative Reading; or, You’re So Paranoid, You Probably Think This Introduction Is About You;” in Novel Gazing: Queer Readings in Fiction (Duke University Press, 1997) – though these essays are part of different critical trajectories. I am also indebted to “Beyond Critique: Reading After the Hermeneutics of Suspicion,” a symposium hosted by the Center for Philosophy, Arts, and Literature (PAL) at Duke in September 2010 and reworked as an MLA session in January 2011.

But it’s also worth acknowledging that many of these essays have significant problems. Best and Marcus have become targets because no one can sort out what, exactly, “surface reading” is. And Love describes Latour as both engaging in “anthropomorphism” and – following Graham Harman – an “object-oriented ontologist,” neither of which seem accurate. Beyond these issues of taxonomy, though, her piece valorizes what she describes as “the descriptive turn,” finding a kind of hope in the idea that his description of tracing doesn’t add anything extra to description. In Love’s own words, “Good descriptions are in a sense rich, but not because they truck with imponderables like human experience or human nature. They are close, but they are not deep; rather than adding anything ‘extra’ to the description, they account for the real variety that is already there.” This seemingly impossible, fantastic account is very different from the
At the end of the day, however, these projects are grounded in ethics and politics. Love’s title makes this explicit, and the occasion for Latour’s piece is his realization that science studies’ insistence on “the lack of scientific certainty” is being mobilized against global warming. But I would like to add a more extensive, structural objection, or to directly challenge “analysis” by drawing on Christopher Langton’s powerful essay, “Artificial Life.” Langton explains, with brilliance and lucidity, that analysis isn’t appropriate for non-linear systems:

Analysis means ‘the separation of an intellectual or substantial whole into constituents for individual study.’ By composing our individual understandings of the dissected component parts of living organisms, traditional biology has provided us with a broad picture of the mechanics of life on Earth. But there is more to life than mechanics—there is also dynamics. Life depends critically on principles of dynamical self-organization that have remained largely untouched by traditional analytic methods. There is a simple explanation for this—these self-organizing dynamics are fundamentally non-linear phenomena, and non-linear phenomena in general depend critically on the interactions between parts: they necessarily disappear when parts are treated in isolation from one another, which is the basis for the analytic method.

For literary criticism, this means that if we accept that a work of literature is, ultimately, a non-linear entity (or comprised of strong interactions between non-homogenous components), then analysis can only make claims about the mechanics of particular components. For example, we might analyze textual patterns, references, sounds, or even “unconscious” subtexts (personal, political, material: whatever unconscious you’re into). But that analysis only tells us about those components—not the “literature” that we engage with. The entirety of Moby-Dick, for example, yields more than every piece of 160 years of criticism could ever show. Every component could be analyzed a number of times at a number of scales, but—as is all too clear—that won’t exhaust the work. (Here one might consider Ishmael’s patchwork “method” as parallel).

Langton’s model also offers a compelling alternative: “non-linear phenomena are most

appropriately treated by a *synthetic* approach.” This means that they require ““the combining of separate elements or substances to form a coherent whole,’” or that with non-linear systems “parts must be treated in each other’s *presence*, rather than independently from one another, because they behave very differently in each other’s presence than we would expect from a study of the parts in isolation.” In short, “rather than take living things apart, Artificial Life attempts to put living things together.”

The relevant implication for literary criticism is that the failure of analysis isn’t a *problem*. Instead, it liberates us to accept that we always-already produce criticism that is additive and synthetic. So we might as well embrace it. Synthesis—especially for an author like Melville, who explicitly invites “looming”—is an appropriate (if not necessary) response.

Latour’s solution to the problems of suspicious critique is remarkably similar. He proposes that we renew empiricism by moving away from the idea of “matters of fact,” or empty “objects” out there, waiting to serve as passive data for an active subject. And his proposed alternative is a turn to “matters of concern,” which are actual occasions, or events, which persist—particular assemblies or gatherings that continue to be recognized instead of being “overtaken.” For Latour this change in focus helps us get “closer” to “facts.” The critic should work “to detect how many participants are gathered in a thing to make it exist and to maintain its existence.” And we should realize that our recognitions and acknowledgements are acts of *tracing*, or the *construction* of networks and alliances, which make each “fact” or “gathering” stronger.

This is one way of thinking through my suggestion that we can no longer think through Melville’s work in terms of autonomous, rational agents at all. Instead, when we think about

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87 Langton, “Artificial Life,” 190.

88 This is the model I have in mind when I embrace Isabelle Stengers’ mode to think with Whitehead or Melville, as I hope to “inhabit the movement that [Melville] proposes for thought,” “not to interpret but to transmit,” or “to take up again in my way, tying it in to my questions, that which has no other truth than the set of resumptions to which it will give rise,” drawing on *Thinking with Whitehead: A Free and Wild Creation of Concepts* (Cambridge: Harvard UP, 2010): 25.


“decomposition by addition,” we can easily look to the first three “sources of uncertainty” about the “what this universe is made of” that Latour outlines in *Reassembling the Social*: there is “no group, only group formation,” “action is overtaken,” and “objects too have agency.”92 Any apparent agent or apparent “social” entity is actually only a society, or gathering, which has been constructed in ways that required a host of objects in ways that we can recognize or trace.93 In short, I would like to say, of Ahab, White-Jacket, and others what Latour says of the “social”: they can designate what is already assembled, but they cannot be a type of material. They *are* collections of “subtle agencies,” or part and parcel of larger combinations of interactionist relations. And in light of this, the thing to do, it seems, is to trace their connections.94

I am not applying ANT: an impossible activity that Latour thoroughly mocks in the “Interlude” of *Reassembling The Social*.95 Instead in responding to the question of the past ten years—what’s left after critique?—I am interested in taking a cue from Melville, or accepting “decomposition by addition,” then seeing where it leads. I also view my responses to other critics and theorists in this mode, or as acts of recognition, tracing, strengthening, but also reassembling. Put another way, my goal is not to critique other readings. Instead my genuine aim is to recognize and to extend them. Here it’s also worth noting that in a recent essay, “An Attempt at a

92 As Latour unpacks these pithy descriptions, “there exist many contradictory ways for actors to be given an identity,” “in each course of action a great variety of agents seem to barge in and displace the original goals,” and “the type of agencies participating in interaction seems to remain wide open” Latour, *Reassembling the Social*, 22.


95 I can quote from but won’t summarize Latour’s hilarious “Interlude in the Form of a Dialog”: “An office at the London School of Economics on a dark Tuesday afternoon in February before moving upstairs to the Beaver for a pint. A quiet but insistent knock is heard. A student peeks into the office…

P: So . . . I take it that you are a bit lost?

S: Well, yes. I am finding it difficult, I have to say, to apply Actor Network Theory to my case study on organizations.

P: No wonder! It isn’t applicable to anything.

S: But we were taught . . . I mean . . . it seems like hot stuff around here. Are you saying it’s useless?

P: It might be useful, but only if it does not ‘apply’ to something.”
‘Compositionalist Manifesto,’” Latour extends his argument to make a strikingly similar move. He presents compositionism as an alternative to critique and then explains that critique can “break down walls, destroy idols, ridicule prejudice,” but composition can “take care, assemble, reassemble, stitch together.” Recast in Melville’s terms, the alternative is looming.96

So while Ahab is frequently taken as the primary integer for the construction of arguments that make the law and contract and individuality and secured bodies primary, I introduce the occasions when leaks break and crack that reading and render it impossible to sustain. But instead of using critique to undermine other work, or to call attention to the points of blindness that all systems must, necessarily, have in order to exist at all, I’m interested in taking account of what leaks do to accounts. I’m interested, that is, in the way that Melville’s leaks call forth interconnections and contacts.

96 Latour explains, “Even though the word “composition” is a bit too long and windy, what is nice is that it underlines that things have to be put together (Latin componere) while retaining their heterogeneity.” Latour also connects “composition” to “compost” and what he helpfully describes as the ‘active ‘de-composition’ of many invisible agents.” Finally, however, Latour links composition to constructivism, explaining that “above all, a composition can fail and thus retains what is most important in the notion of constructivism (a label which I could have used as well, had it not been already taken by art history). It thus draws attention away from the irrelevant difference between what is constructed and what is not constructed, toward the crucial difference between what is well or badly constructed, well or badly composed. What is to be composed may, at any point, be decomposed.” See “An Attempt at a ‘Compositionist Manifesto’,” New Literary History 41, no. 3 (2010): 474.
The Case

Within the narrative jacket around a sperm whale’s silky second skin and its blubbery first skin, we find another envelope: the Case. Interestingly enough, just like the other skins, this case, vessel, or layer happens to yield. It is quite permeable. In fact, “a whale’s case generally yields about five hundred gallons of sperm, though from unavoidable circumstances, considerable of it is spilled, leaks, and dribbles away, or is otherwise irrevocably lost in the ticklish business of securing what you can.”97 Substance from one case moves toward another vessel—in this case, a cistern, via buckets—and in the transition from case to case, contents are, inevitably, lost.

This Case, it turns out, seems to hold the whale’s brain, which is “at least twenty feet from his apparent forehead in life,” and “in another cavity,” “hidden away behind its vast outworks, like the innermost citadel within the amplified fortifications of Quebec. This apparent “brain”—notably also the whale’s “sperm casket”—certainly seems to be enclosed.98 It is found behind a “dead, blind wall.” And Melville portrays it solidly: “I have described to you how the blubber wraps the body of the whale, as the rind wraps an orange. Just so with the head; but with this difference: about the head this envelope, though not so thick, is of a boneless toughness, inestimable by any man who has not handled it.” Harpoons bounce off this “wad” of “jam” incomprehensibly. But eventually it leaks. As with the Pequod’s carpenter, whose “brain, if he had ever had one, must have early oozed along into the muscles of his fingers,” this inner citadel, despite “amplified fortifications,” gives way.99

97 Melville, Herman, Moby-Dick, 244, 269.
98 Ishmael explains: “so like a choice casket is it secreted in him, that I have known some whalemens who peremptorily deny that the Sperm Whale has any other brain than that palpable semblance of one formed by the cubic-yards of his sperm magazine… as for his true brain, you can then see no indications of it. Melville, Herman, Moby-Dick, 275.
99 Melville, Moby-Dick, 267, 357.
I don’t wish to ignore the obvious sexual overtones of these passages. It’s well worth noting that these leaks are, ultimately, caused by a “long pole,” which Tashtego rammed “harder and harder, and deeper and deeper” into the floating, gas-filled body of a recently killed whale. In the midst of extracting at least his eightieth bucket of “fragrant sperm,” we encounter the moment of “Intimate Excess” that opens Samuel Otter’s Melville’s Anatomies: Tashtego’s plunge into a whale’s “‘secret inner chamber and sanctum sanctorum.” What I’d like to add, however, is that Daggoo becomes coated with “a thick mist of spray” before Queequeg —“a naked figure with a boarding-sword in its hand”—dives in to bail him out. And we might think of this excess not in terms of erotic “undertones” (turned overtone) but, instead, in terms of “life” and generation. As we read in the sixth paragraph of “Loomings,” “the image of the ungraspable phantom of life” is, in fact, the “key to it all.”

Here my goal is not to critique or contradict Otter’s brilliant reading of the way these very passages draw on phrenology, physiognomy, other tools of “the ethnological quest” to convey that, thus far, information hasn’t leaked. But Melville’s Anatomies focuses on epistemology, while my focus is on ontology. I’m interested in the ways that Melville’s leaks work against

100 Melville, Moby-Dick, 270.
101 Samuel Otter’s Melville’s Anatomies (Berkeley: University of California Press, 1999), 1. Future citations are in-line as “Otter.”
102 Melville, Moby-Dick, 272.
103 As thinkers like Stefan Helmreich and Eugene Thacker point out, “life” isn’t a term that stands for itself. Foucault suggests, in The Order of Things (New York: Vintage, 1970) 139, that until the nineteenth century “life itself did not exist. All that existed was living beings, which were viewed through a grid of knowledge constituted by natural history.” And Stefan Helmreich adds, in “What Was Life? Answers from Three Limit Biologies,” Critical Inquiry 37.4 (2011) 675, that in our moment “life itself has been disassembled and revealed as an effect, not an originary force.” Melville’s particular way of responding to structural, constructivist conceptions of life will be an important part of my second chapter. But here it’s also important to note that the link I’ve offered between the erotic and generative production has been called into question by critics like Lee Edelman, who resist assumptions of “reproductive futurism.” Lee Edelman, No Future: Queer Theory and the Death Drive (Duke University Press, 2004).
104 Melville, Moby-Dick, 20.
105 Otter, Melville’s Anatomies, 101, 154.
“securing” both literally and conceptually. (Harpoons, it turns out, often double as pens). But I would like to shift focus away from the various ways that leaks slip through our grasp—away from failure to interpret, to own, or to capture. Instead while Otter attempts to “get inside Melville’s voluminous effort to get inside his compatriots’ heads,” I attempt to trace Melville’s construction of “leaks” and the ways that they simultaneously create and decompose. Ultimately I’m interested in Melville’s leaks as icons of an ontology that’s concerned with fluidity or process.

This series of “anatomies” begins with “The Battering-Ram,” as Ishmael surmises that a whale “may possibly have some hitherto unknown and unsuspected connexion with the outer air, as to be susceptible to atmospheric distension and contraction.” In simpler terms, thanks to the “elasticity of its envelop,” each whale is extremely susceptible to changes in its atmosphere. The whale—and I argue the same holds true for Melville’s “persons”—is strongly affected by “unknown and unsuspected,” imperceptible, elemental forces in the “outer air” beyond it. But here Ishmael offers a telling command: “Now, mark. Unerringly impelling this dead, impregnable, uninjurable wall, and this most buoyant thing within, there swims behind it all a mass of tremendous life.” Here we are directed to look toward the dead case, which simply can’t hold once Tashtego plunges in. But we are also simultaneously directed to mark, or to respond to Ishmael’s letters, producing our own cases. And whether we focus on the “buoyant” expansion of gas that pressures the whale’s “case” or on the wall of Melville’s writing, Ishmael sees “life” “behind” it all—pressuring both the case and its contents, “unerringly impelling.”

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106 See Oren Abeles’ “Of Authors and Harpooners” Explicator 68, no. 4 (Dec., 2010): 242-245.
107 Here it’s worth noting that Otter does add: “I hope this enterprise will reveal, rather than confine.” And Otter’s interest in the brilliantly articulated “quest for depth through overwrought surface” is productive in its own ways – including as an inspiration for this project. Otter, Melville’s Anatomies, 7, 2.
108 Melville, Moby-Dick, 268.
I pair this mark at the whale’s case with the mark of a reader (turned author) not on the basis of this phrase but because this is where Melville begins. In his first chapter, “Loomings,” “the image of the ungraspable phantom of life” is described as the “key to it all.” That chapter concludes with the white whale as “hooded phantom.” And pages earlier Melville’s prefatory “Etymology” begins with a curious description: “While you take in hand to school others, and to teach them by what name a whale-fish is to be called in our tongue, leaving out, through ignorance, the letter H, which almost alone maketh up the signification of the word, you deliver that which is not true.” The “whale,” then, is not a “wale,” or a mark: welt, scar, or skeleton. Like welts in White-Jacket or Typee’s tattoos, “wales” mark permanence. Meanwhile the whale—textual “image of the ungraspable phantom of life” and a “hooded phantom”—is paired with “impalpable” “elements” from the atmosphere. Those whales, or invisible but material elements, float in a stream of “endless processions” into Ishmael’s “inmost”—and thus curiously spatial—“soul.”

In short, Melville’s leaks offer not the impossibility of capture but the way dynamic objects consistently exceed whatever attempts to cover them. We can lament that there is no immutable boundary separating “subjects” or “objects” from their environments, and we might wish for one-to-one correspondence between language and whatever it signifies. But in Melville’s worlds, as I’ll explain, the only “cases” we can even try to analyze are the ones that are both dead and welded shut. Ishmael can represent his own story only after it’s over and he can “recall all the circumstances” of his traumatic experience. And spermaceti becomes “concrete”—physically discernible and stable—only after death: “though in life it remains perfectly fluid, yet, upon exposure to the air, after death, it soon begins to concrete; sending forth beautiful crystalline

109 Melville, Moby-Dick, 20, 22.
110 Melville, Moby-Dick, 7.
112 Melville, Moby-Dick, 22.
shoots, as when the first thin delicate ice is just forming in water.”  

113 With the loss of internal fluidity these “cases” are closed. Then we can try to get a “hold” of them. But as Samuel Otter very eloquently expresses, we still don’t find depth: we find “overwrought surface.”  

114 From the deposition in “Benito Cereno” to the whale’s brain in *Moby-Dick*, Melville’s illegible “cases” famously invite and then refute hermeneutic models. But those “closed cases” also tend to invite generative modes of reading; or, to use Melville’s image, they prompt weaving on textual skeletons. This is clearest in *Moby-Dick* when Ishmael imagines coral insects as “weaver-gods”:

Amid the green, life-restless loom of that Arsacidean wood, the great, white, worshipped skeleton lay lounging—a gigantic idler! Yet, as the ever-woven verdant warp and woof intermixed and hummed around him, the mighty idler seemed the cunning weaver; himself all woven over with the vines; every month assuming greener, fresher verdure; but himself a skeleton. Life folded Death; Death trellised Life. These “weaver-gods” weave upon a whale skeleton—while vines weave upon them. And in the midst of “Life” layering upon every available trellis, Melville imagines proliferating language. “Speak, weaver!” Ishmael demands, until “figures float forth from the loom.” And here Melville ultimately seems to tell us about reading and writing. To look at the loom, he explains, is to be “deafened.” But “when we escape it” we can “hear the thousand voices that speak through it”—as if meaning is in the uses of language, as opposed to the letters themselves.  

115 This relationship between dead skeletons and generative production continues in the very next scene. Ishmael explains that he has had a whale’s skeleton tattooed onto his right arm, since there was “no other secure way of preserving valuable statistics.” But, he continues, “I was crowded for space, and wished the other parts of my body to remain a blank page for a poem.” And when Ishmael relates Queequeg’s story, we encounter his counterintuitive plan to “present the whole story such as it may prove in the mere skeleton I give.” The excess, it seems, is to come from the reader: a builder, not an architect. To borrow from “Cetology”: “small erections may be finished by their first architects; grand ones, true ones, ever leave the copestone to posterity.” So “whole book is but a draught – nay, but the draught of a draught.” Imagine: *Moby-Dick* as outline. Melville, *Moby-Dick*, 345-346, 58, 125.
This pragmatic, interactionist model presents us with a way to reconsider Melville as an author. Critics dating back at least to Howard Vincent have considered Melville’s “patchwork” fictions, or his “borrowing” from “original” sources. But I would like to suggest that this was no simple theft—it’s an extension of Melville’s way of thinking about writing. This is clearest in Israel Potter’s atypical and telling dedication: “Israel Potter well merits the present tribute,” after years of receiving “a posthumous pension” that is annually paid every year “by the spring in ever-new mosses and sward.” Melville, of course, links this verdant, regenerative growth of moss and grass with his own writing. He explains that his “present account has been drawn” from a “rescued” and old “tattered copy.” And his expansions, additions, and “shiftings of scene” might be regarded in light of “a dilapidated old tombstone retouched.” This connection between the revision of Potter’s story, tombstone, and decomposing body is far from incidental. Instead Melville concludes Potter’s story by explicitly linking his “print” and his “self”: “He dictated a little book, the record of his fortunes. But long ago it faded out of print—he himself out of being.”

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116 Benito Cereno is drawn from Amasa Delano’s A Narrative of Voyages and Travels in the Northern and Southern Hemispheres (House, 1817), and as the editors of the Northwestern-Newberry Edition’s “Historical Note” indicate, Israel Potter “began as a rewrite of an obscure little narrative entitled Life and Remarkable Adventures of Israel R. Potter,” and after its opening chapter Melville “retells that tale, with close adherence to the language and events of the Life” – “a virtual paraphrase of a previously published work” – for the first fifth of the manuscript before “shaking free of the original narrative” and moving “between invented episodes and historical sources unrelated to the Life.” The editors find that “the Life, a matter different in kind and extent from Melville’s habitual use of ‘sources’ for some passages beginning with Typee.” I am suggesting, instead, that Melville is interested in this method. See Israel Potter: His Fifty Years of Exile, Volume Eight, Trade (Northwestern University Press, 1998), 173, 182. Howard Vincent’s project is The Tailoring of Melville’s White-jacket (Northwestern University Press, 1970).

117 Here it’s also worth considering John Bryant’s compelling tracing, in the introduction of his “fluid text” edition of Moby-Dick, of the ways that artists’ varied “versions” of the text show “how modern readers reconstruct the text to resemble the modern imagination. “Herman Melville, John Bryant, and Haskell S. Springer, Moby-Dick (Pearson Longman, 2007), xxv.

118 Herman Melville, Israel Potter: His Fifty Years of Exile, Volume Eight, Trade (Northwestern University Press, 1998), vii, 169.
I view Melville’s rejection of “dead letters,” inextricably paired with “dead men” in the famous epilogue of “Bartleby, the Scrivener,” as a serious challenge to most notions of “character” defined as stable person or as text.¹¹⁹ And the alternative, I am suggesting, is the model we see with Melville’s own tombstone: a blank scroll with vines growing over it. Melville’s last message was, interestingly enough, delivered without letters. Instead we find his obsession with the verdant, growing on—reviving and revising—the “dead.”¹²⁰ And this way of thinking about both growth and revision seems to be Melville’s response to any kind of dead “character” (persons or letters).

My point is that these transitions at the material level also hold at political and textual levels. “The democratic element,” Melville tells us, serves as a “subtle acid” that simultaneously disintegrates bonds and builds new ones—in a space where, in fact, laws work the same way.

So on one hand “families rise and burst like bubbles in a vat.” New things are “produced” by “corroding the old.” But that corrosion is still green, or the “signet of all-fertile Nature.” And, in fact, Melville explains, in both nature and in “political institutions,” “Death itself becomes transmuted into Life,” such that the American political system seems to possess the “virtue” of “natural law”: “that out of Death she brings Life.”¹²¹

Like Hawthorne and Child before him, Melville seems to be reminding us of the importance of a body of law that is also a so-called “living document.” Lydia Maria Child opens Hobomok by explaining that the written source that she discovers demands considerable revision in a way that

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seem to point us to the Constitution: “The bold outlines of [our forefathers’] character alone remain to us. The varying tints of domestic detail are already concealed by the ivy, which clusters around the tablets of our recent history. Some of these have lately been unfolded in an old, worn-out manuscript, which accidentally came in my way.” Child announces that she will “take the liberty of substituting [her] own expressions for his antiquated and almost unintelligible style”—clearly suggesting an update. And she frames this with the instruction: “‘Send it to the Printer,’” even though she understands that “the work is full of faults, which [she has] talents enough to see, but not to correct.”

Hawthorne, of course, famously uses the overdetermined scarlet letter (adulterer to angel; unspoken but referenced “original signification” to present performance) to undermine the authority of text. He (allegedly) finds a cloth letter and declares: “certainly, there was some deep meaning in it, most worthy of interpretation, and which, as it were, streamed forth from the mystic symbol, subtly communicating itself to my sensibilities, but evading the analysis of my mind.” But he also finds a key: “I had hitherto neglected to examine a small roll of dingy paper, around which it had been twisted. This I now opened, and had the satisfaction to find… a reasonably complete explanation of the whole affair.” The letter, it seems, requires interpretation. And in responding he eventually continues: “I have allowed myself…as much license as if the facts had been entirely of my own invention.” But amidst the production of his interpretation—and production—Hawthorne adds “what I contend for is the authenticity of the outline.”

We might read Israel Potter as a text that elaborates on this theme: “from a tattered copy, rescued by the merest chance from the rag-pickers, the present account has been drawn,” Melville tells us. And with the exception of a few expansions, additions, and “shiftings of scene,” Melville explains, the account “may, perhaps, be not unfitly regarded something in the light of a

122 Lydia Maria Child, Hobomok: A Tale of Early Times (Cummings, Hilliard & Company Printed by Hilliard and Metcalf. 1824), 7, iv.
dilapidated old tombstone retouched” In short: the reading of the source text Melville’s novel was explicitly based on brought his character back to life, using both paint and new readers to animate his dead letters. And this isn’t only about the direct relationship between “print” and “being” that Melville draws. The original subtitle of Israel Potter was “A Fourth of July Story.”

This “living” print seems to animate. But in Typee, Tommo is repeatedly anxious that tattooing will destroy his identity. In White-Jacket, “D.D.” for “Discharged, Dead” is written by Shenley’s name in “Black’s best Writing Fluid.” And this complex connection between U.S. racial slavery and ink is even clearer at the conclusion of “Benito Cereno,” when Melville’s revision of another “real” “person”—Amasa Delano, author of Narrative of Voyages and Travels, which inspired “Benito Cereno”—suggests: “‘The past is passed; why moralize upon it? Forget it. See, yon bright sun has forgotten it all, and the blue sea, and the blue sky; these have turned over new leaves.’” The world begins to write anew—and on new leaves of paper. But Don Benito is not sold. Instead, he points out, “dejectedly,” that these things fluctuate ‘“because they have no memory”’—“because they are not human.” Delano misunderstands and asks him: “you are saved. What has cast such a shadow upon you?” And Don Benito’s answer for why humans cannot turn over “new leaves” like the world that forgets is seemingly doubled: “The negro.” This resonates in terms of the problems foregrounded by the two major components of Melville’s text: the story and its deposition, which trouble both racial slavery and the ink that underworte it. “Benito Cereno” tellingly begins just after the epilogue of “Bartleby”—a story where we might even argue that a character is brought to “life” by the attorney’s reading—and our own.

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As I’ve worked to express the subject of “Melville’s Ontology” is the contrast, in Melville’s work, between a kind of cosmopolitan hope based in nineteenth-century scientific narratives and Melville’s anxiety about linguistic and legal incorporation. Moving to the level of exchangeable atoms is a great leveler, especially in a nation where notions of the liberal agent and concomitant natural rights have been destroyed by the specter of racial slavery. These discourses enabled Melville to develop a different conception of “identity” as something deeply contingent and constructed—perpetually composed and recomposed. And they enable him to develop a different approach to the central political problem of his moment. When Melville turns, for example, to chemistry or meteorology he also challenges the possibility of legal “persons” who literally come into existence through reductive labels, in text. This study concludes with The Confidence-Man: Melville’s final piece of published prose. And that work considers the question: what, exactly, gives us confidence in the existence of a man? Or how can a person be identified without a name? The work tellingly begins with “a mute” who “appeared suddenly.” And “in the same moment with his advent”—or his creation, in text—“he stepped aboard the favorite steamer Fidèle,” or a space for those with faith.

So how might we respond to a representation of a “person,” whose existence is in language? On one hand “Bartleby the Scrivener” offers “Dead letters! does it not sound like dead men?” And this “moment of advent” that happens in text produces an isolated “mute” figure who is also “in the extremest sense of the word, a stranger.” This account of the isolation of persons whose advent—and existence—is linked to text offers the kind of enclosure that we see White-Jacket look for when he wants to be painted and impermeable to the influences of his environment.

125 For this argument about personhood and slavery’s uncanny undermining of natural rights, see Wald, Priscilla, Constituting Americans: Cultural Anxiety and Narrative Form, Durham: Duke UP, 1995. For more on the shift to matter as a great leveler, see Latour’s “Parliament of Things” section in We Have Never Been Modern (Harvard 1993) or Jane Bennett’s Vibrant Matter (Duke 2009).

126 Melville, Confidence-Man, 3.

127 Melville, Piazza Tales, 45.
But Melville also offers a kind of organic model of language that does not make descriptions of his fluctuation antithetical to his (alleged) chemical existence. Far from being a “stranger,” he is a “universal absorber” expatriated from this mode of identification—and “painted again and again” in the attempt to “truly present its actual account at any given period.”128 And we might also argue that in The Confidence-Man: His Masquerade, Melville makes space for this kind of language use, creating not just questions about the impossibility of locating a stable identity—in a text where critics can’t decide whether there is one confidence man or nine or seven—but a model that allows for his “deaf mute” to be read. In fact, his final scene is less a conclusion than what seems to be a kind of promise for a future grounded in the possibility of new combinations—and new interpretations. A man is “led away” as the light goes out, and far from saying “the end,” Melville’s response is: “something further may follow of this Masquerade”: a telling reference to both the idea of an afterlife and to the book’s own subtitle.129

Melville, I am suggesting, resists language that is used as cases or contracts or as anything that is stagnant or final. At that point, dead letters are paired with dead men. But he is an author. He is not against language. Instead he supports an organic model that is about production. This is clearest in his chapter “The Crotch,” which begins “out of the trunk, the branches grow; out of them, the twigs. So, in productive subjects grow the chapters.” Here Melville’s focus on language centers on its generation and its use—and not on its role as something that identifies or captures. Put another way: Melville offers not just anxiety about legal language—or words that aspire to have permanence. He also works to make his language organic. This was clear in my initial example with Pierre, where a pamphlet in the lining of his jacket was “soft and worn almost to tissue,” like skin. In fact, in the moment he was “hunting for this pamphlet,” attempting to use it,

128 Melville, White-Jacket, 4, 201.
129 Melville, Confidence Man, 251.
“he himself was wearing the pamphlet.” When he engaged with written words, their text was absorbed by his texture. And if we extrapolate, responding to the most difficult problem of posthumanist criticism—which acknowledges and attempts to accept and to respond to an account of humans moved by impact before reason—these chapters serve as fields of force.

I look to the ways that Melville questions most notions of “character” and “agency” throughout his late fiction, or from _White-Jacket_ to _The Confidence-Man_. But what I find resonates with claims that I am invested in making without recourse to Melville’s texts. This is not a claim that Melville is “right.” And I am not giving up my privileged position as a “provincial and sentimentalist in Truth.” Instead Melville’s famous phrase reminds us that while we certainly don’t “own the whale” we are grounded in experiences that are necessarily contingent (i.e. provincial) and affective (i.e. sentimental). To borrow a concept from systems theory, these local, non-rational, structural operations are the very things that allow “us” to exist.

Here we lose fantasies related to objectivity, or the so-called “view from nowhere”—but we also acknowledge the conditions that make information processing and interpretation possible. We are inevitably dividing information from noise according to our own constructions, habits, and dispositions. But this isn’t to say that our environments and interlocutors don’t “push back.”

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130 Melville, _Moby-Dick_, 289; Melville, _Pierre_, 284.

131 The current trend in Melville Studies is to turn to Melville’s poetry – and rightly so. After years of being marginalized, _Battle-Pieces_’ resurgence was clear at the Melville Society’s Ninth International Conference in 2013, “Melville and Whitman in Washington: The Civil War Years and After.” Meanwhile _Clarel_ was the focus of the Society’s Seventh International Conference in Jerusalem, “Melville and the Mediterranean.” In choosing to focus on Melville’s late fiction, I do not intend to devalue Melville’s poetry. But projects need to have parameters. And the texts that inspired my argument – _White-Jacket_, “The Apple-Tree Table,” and _The Confidence-Man_ – also deserve more critical attention. Finally, since my argument is that Melville turns to scientific narratives to offer a model of “personhood,” it’s also worth remembering that resistance to legal constructions of “personhood” had a very different valence before _Battle-Pieces_ was released in 1866.

132 Melville concludes “The Battering-Ram” with a joke: “unless you own the whale, you are but a provincial and sentimentalist in Truth.” But there is obviously no owning the whale – which can’t even be seen all at once! And there is no owning – or possessing – the sort of universal truth invoked by what philosophers reference as “Truth with a capital T,” which is allegedly accurate regardless of the content or context of its propositions. Instead, we are all provincials and sentimentalists in Truth, which seems to suggest the importance of immanence or contingency, location, and affect. Melville, _Moby-Dick_, 268.
This case clearly isn’t closed. And in many ways my goal, in turning to “Melville’s Ontology,” is to open up some very different ways to think not only about but also with Melville. In Isabelle Stengers’ terms, this means taking up texts not to work through discussions of them or to hold the “right interpretation” but, instead, to “inhabit the movement that [Melville] proposes for thought,” “not to interpret but to transmit,” or “to take up again in my way, tying it in to my questions, that which has no other truth than the set of resumptions to which it will give rise.”

This list should have no completion; or, in Melville’s terms, it is another architecture, perpetually awaiting builders as a “draught of a draught.” But I can sketch the skeleton that I’ve suggested here: “leaks” simultaneously create and decompose, fluidity and process do more than create epistemological problems, “objects” are abstracted from dynamics, language is a compositional activity, “depths” are still surfaces, we need new models of “character” and “agency,” and for all these reasons — along with the U.S. political climate in the 1850s — “contracts” are problematic.

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133 This methodological move is borrowed from the introduction of Isabelle Stengers’ Thinking with Whitehead: A Free and Wild Creation of Concepts (Cambridge: Harvard UP, 2010): 25. But it’s also worth noting that Andrew Delbanco echoes this sentiment in Melville: His World And Work (New York: Knopf, 2005), 12: “To paraphrase the historian Dominic LaCapra, many writers are good for thinking about, but only a few, after their time has passed, continue to be good for thinking with. Melville belongs to that select company.” Here Delbanco notably cites LaCapra’s “Canon, Texts, and Contexts” in Learning History in America (Minneapolis: Minnesota UP, 1994), p. 123.

134 Melville begins his infamous chapter on “Cetology” by explaining: “my object here is simply to project the draught of a systematization of cetology. I am the architect, not the builder.” As the chapter concludes he adds that “small erections may be finished by their first architects,” but “grand ones, true ones, ever leave the copestone to posterity,” “God keep me from ever completing anything,” he offers. “This whole book is but a draught—nay, but the draught of a draught.” And then he pushes even further, describing the “task” as having “one's hands among the unspeakable foundations, ribs, and very pelvis of the world.” Melville, Moby-Dick, 136, 145.
0. Melville’s Education in Mathematics and Science

Decades before his image was cast in bronze in the Library of Congress, and over twenty years before he became the first Secretary of the Smithsonian, Joseph Henry was a professor at the Albany Academy.\(^1\) And while this connection hasn’t been made in print, Herman Melville was one of his students. In fact, Melville, who frequently struggled in school, won a book award for finishing at the top of Henry’s class.\(^2\) This was in 1831, and the timing is remarkable. Henry made a name for himself, that year, as a brilliant experimentalist who built the most powerful magnet ever constructed.\(^3\) Then he developed the first prototype of a telegraph machine. Over a mile of wire wrapped around one of the upstairs rooms in the Albany Academy. And perhaps not surprisingly, Henry “consistently demonstrated this arrangement to his classes,” tapping a magnet to sound a bell across the room—and shocking his students with action at a distance.\(^4\) This seems to have made quite an impression on Melville: years later a piece of rusty telegraph wire was one of his prized possessions. (It sat on his desk and was his favorite paperweight).\(^5\) And, in general, this connection to Henry—who also studied atmospheric phenomena related to electricity and magnetism—offers answers to longstanding questions about Melville’s understanding of science.\(^6\)

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\(^1\) Nathan Reingold, ed. *The Papers of Joseph Henry* (Washington, D.C.: Smithsonian Institution Press, 1972), 1:134. For readers unfamiliar with Henry: his work on electromagnetism was famous enough that the unit of induction is named “the henry” after him.


\(^5\) This six-inch piece of cable can be viewed in the Melville Room of the Berkshire Athenaeum in Pittsfield. This description is drawn from their collection notes.

In 1831 the Albany Academy was also the national center of work on meteorology, thanks to a law that the thirty academies chartered by the state had to provide annual weather reports in order to receive funding. Data sheets were sent to the capital from across the state, and the school’s principal, T. Romeyn Beck, collected and reported the results—along with Joseph Henry, who went on to dedicate thirty percent of the research budget of the brand new Smithsonian Institute to an even more extensive “system of extended meteorological observations, for solving the problem of American storms.” In Henry’s papers we find descriptions of meteorological devices at the Academy, along with evidence that younger students had at least some awareness of this program. In fact, at one point a group of Melville’s classmates stole Principal Beck’s prized, government-issue rain gauge. Albany, in short, would have offered a stunning education in science—even to a boy who was only twelve.

![The Old Albany Academy building from the family’s “Albany Book” (Sealts 380)](Image)


7 For official documentation see University of the State of New York Board of Regents, Instructions from the Regents of the University, to the Several Academies Subject to Their Visitation, Prescribing the Requisites and Forms of Academic Reports (Albany: 1834), 12. For more on meteorology see Fleming, Meteorology in America, xxi, 9. For more on Henry see Reingold, The Papers of Joseph Henry, 1:xxvi.

8 Fleming, Meteorology in America, 76. Also see T.R. Beck and Joseph Henry, An Abstract of the Returns of Meteorological Observations Made to the Regents of the University, 1825 (Albany: 1828).

9 This account is drawn from papers in the Joseph Henry Collection in the Smithsonian Institution Archives: Record Unit 7001, Box 7, Folder 11; Box 28, Folder 1; Box 28, Folder 9.

10 Melville’s age may raise questions about his ability to be strongly influenced by Henry. But in 1831 twelve-year-old boys were eligible to join the Navy, and the minimum age for college was usually fourteen.
Melville entered the Albany Academy in the Fall of 1830. And by the Summer of 1831, he was Joseph Henry’s student. At least, in the words of Hershel Parker, arguably Melville’s most thorough biographer: “Herman took an arithmetic class under the care of Professor Henry and for the second time in his life surprised everyone by doing extremely well.” On August 4th, three days after his twelfth birthday, on the brink of a three-week summer vacation, Herman was awarded the first premium in his class on Ciphering Books, along with a prize copy of *The London Carcanet*.11

Melville’s copy of *The London Carcanet*, complete with the inscription that celebrated his first premium. Yale Collection of American Literature, Beinecke Rare Book and Manuscript Library.

The story of these awards is really quite remarkable. The Academy held two public examinations every year. Notice was given so that parents, friends, and people from the city could attend. And this was truly an event. “A procession, including a band, students, faculty, trustees, judges… and parents, paraded” down the street to the Academy at a school where students were accustomed to military exercises. A minister opened what were, apparently, “solemn proceedings.” Then “earnest students declaimed classical and patriotic selections.” And finally, the ceremony concluded with “premiums for scholarship, consisting of ‘books elegantly bound.’”12

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These were, quite literally, competitive examinations judged by the Board of Trustees.\(^{13}\) And the Academy was a school where students were very accustomed to being on display. The school kept a “Public Register of the relative daily standing and merits’ of each scholar,” which was shuffled after every recitation. It was primarily academic, but students could also lose points and position due to behavioral infractions.\(^{14}\) So in some ways the Academy was of an older moment: the business of each day was to be “opened and closed with prayer,” the first entry under “conduct and discipline” required every student to attend “some place of worship” “on the Lord’s day,”\(^{15}\) and in 1830 there was even a “short-lived” attempt to institute a “military drill.”\(^{16}\) But the school’s emphasis on public performance was simply different. Gideon Hawley, the Secretary of the Board of Regents who transformed education in New York, described this process as the “most effectual” and “peculiar” thing about the Academy.\(^{17}\) The very existence of book awards gives a sense of the importance of this process. $94.45 was spent on elegant books at a time when the school was heavily in debt—and tuition brought in less than $900 a quarter.”\(^{18}\)

Excerpt from list of students who won copies of the London Carcanet.
Albany Academy Trustees’ Notes and General Records.
Albany Academy Repository, New York State Library.

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\(^{13}\) Albany Academy, *Statutes of the Albany Academy 1829*, 16.

\(^{14}\) The “Regulations of the Faculty” explain that any violation of rules, which included swearing, dirty shoes, or spilling ink, would “be punished with the loss of one place.” And three infractions in one day would move the student “to the foot of his class” with his name on an actual public “BLACK LIST.” Albany Academy, *Statutes of the Albany Academy 1834*, 29. Sadly we don’t have records for the Register—or the black list—which were lost in a fire. *Melville’s Early Life and Redburn*, 54.

\(^{15}\) Albany Academy, *Statutes of the Albany Academy 1834*, 19

\(^{16}\) Albany Academy, *Historical and Financial Summary of the Albany Academy*, 15

\(^{17}\) Hawley’s work was significant enough that he was a member of the first Smithsonian Board of Directors, which was chaired by the Vice President of the United States. (This enabled him to have a hand in Henry’s appointment). Gideon Hawley, *Address Delivered at the Public Exercises of the Albany Academy*, 15.

\(^{18}\) SI Archives RU 7001, Box 28, Folder 9; Albany Academy Trustees, *Notes and General Records*. 

51
The Academy was competitive. It was innovative. It awarded success. And this is no surprise. Principal T.R. Beck ran the state’s groundbreaking meteorological program. Joseph Henry changed the landscape of work on electromagnetism. And Professor of Latin and Greek, Peter Bullions, published a number of best-selling textbooks.\(^\text{19}\) “Graduates of the Academy were qualified to transfer to the junior year of college,” and in later years Henry explained that the Academy “paralleled the course of study at Yale College and was more exacting in its requirements for graduation than were many of the smaller colleges.”\(^\text{20}\) Here it’s also important to realize that Rensselaer Polytechnic Institute (then the Rensselaer School) shaped the community. Four days after Henry was appointed to the Academy’s faculty in 1826, for example, he left to spend the summer enrolled in Rensselaer’s “floating school of science” on the Erie Canal. It was designed to publicize the school’s new teaching method, which emphasized “student participation and demonstration.”\(^\text{21}\) The trip also took Henry to West Point, where he observed their laboratory (the best in the nation) and new teaching tools, including blackboards, which were “virtually unknown” at the time.\(^\text{22}\) In 1829 the elementary school was formed. (It was the first in New York Academies). By 1830 its laboratory was ready. And by 1831 Joseph Henry had produced the inventions that made him famous. So despite his family’s many difficulties—or at least as far as education was concerned—Melville may have been in the right place at the right time.\(^\text{23}\)

\(^{19}\) See, especially, Peter Bullions, *Principles of English Grammar* (Albany: Steele, 1834).

\(^{20}\) Charles Irwin Weiner, “Joseph Henry’s Lectures on Natural Philosophy: Teaching and Research in Physics, 1832-1847” (Cleveland: Case Institute of Technology, 1965), 15. Weiner adds that the Academy’s “course of study compared favorably to courses offered in the junior and senior years at Harvard” and directs readers to L.F. Snow’s *The College Curriculum in the United States* (New York: 1907), 126-127.

\(^{21}\) Amos Eaton led this trip with twenty students who traveled the canal to Lake Erie. “The group frequently debarked to make a geological survey of the adjacent region, collect specimens, and visit points of interest. The students gained experience by delivering lectures on botany, chemistry, and geology to the townspeople who could be gathered to hear them.” Weiner, “Joseph Henry’s Lectures,” 22-23.


The Albany Milieu

In 1830 Albany was a thriving city with an equally thriving intellectual life. It was so desirable, in fact, that when Joseph Henry—a high school teacher with no college degree—was offered a chaired position at Princeton, he was hesitant to leave. He explained in a letter to John Maclean, then Vice President of Princeton (and focused on faculty recruiting):

I would not however readily exchange my present situation for many that might offer... The Institution is very flourishing and established. My salary is $1000 per annum, and as Librarian of the Albany Institute I have access to a valuable collection of scientific works and most of the European periodical publications. In connection with Dr. T.R. Beck I have the principal direction of the meteorological observations made by the different academies of the state of New York to the Regents of the University. In this work I am considerably interested and have hopes at some future time to deduce many facts from it of importance to the science of Meteorology.

(In fact, when Henry did reach Princeton, he found himself very dissatisfied with their library).

Albany was the sort of place where Henry could give multiple public lectures on topics like “Galvanism, a science then but little understood” and have those lectures be “attended by a large Assembly of the Elite from Albany and its surroundings.” Evening “lectures and experiments in chemistry” “were favored with the presence of young ladies as well as young gentlemen.” And the Albany Institute was formed with the “high purpose” of promoting “useful improvements” to “elevate the character of the state.” The group began to publish its Transactions with the explicit

24 Albany’s strength is the first note struck in Reingold’s twelve-volume The Papers of Joseph Henry, 1:xix. “Albany was not the American frontier town one might expect but a fair-sized, wealthy, and vigorous city” where “leading citizens” “actively participated in the city’s progress and growth.” It was the 8th largest in the U.S. in 1830, the “seat of state government,” and a “trading and manufacturing center” made possible by the Erie Canal. Gilman makes a similar point in Melville’s Early Life and Redburn, 44. And Weiner aptly describes Albany as a “center for innovation in science education with a strong tradition of support for science and an important stake in new technology” in “Joseph Henry’s Lectures,” 10.

25 SI Archives RU 7001, Box 7, Folder 9.

26 Reingold, The Papers of Joseph Henry, 2: 63-64.

27 SI Archives RU 7001, Box 27, Folder 18.

purpose of disseminating a taste for knowledge.\textsuperscript{29} Citizens were engaged in academic and intellectual debates. And they actively followed the conversations of scholars in their moment.\textsuperscript{30}

Donations to advance scientific work in the community were also common. In 1832, Henry read a paper to the Albany Institute on the aurora borealis and its influence on “the magnetic intensity at Albany.” Then he published it in the annual meteorological report to the Regents.\textsuperscript{31} His goal was to build up support for a petition for “funds to purchase an apparatus for observations in terrestrial magnetism.”\textsuperscript{32} And this was entirely possible. In Melville’s first year at the Academy, for example, nineteen people responded to a call that “friends and guardians” “devise some means” to complete the school’s new laboratory.\textsuperscript{33} Donors like Stephen Van Rensselaer (of the Rensselaer School) and William James (grandfather of Henry and William) took up his call, making substantial contributions for the purchase of “philosophical apparatuses.”\textsuperscript{34} These ranged from a telescope with three eyepieces (one terrestrial; two celestial) to an electrical machine that was “perhaps the greatest in diameter of any in this country” and a working model of a hydraulic dam that would raise a small stream up to 40 feet.\textsuperscript{35}

\begin{itemize}
\item \textsuperscript{29} Albany Institute, \textit{Transactions of the Albany Institute} (Albany: Webster and Skinners, 1830): 3, 153; Reingold, \textit{The Papers of Joseph Henry}, 1:65-72.
\item \textsuperscript{30} SI Archives RU 7001, Box 7, Folder 4.
\item \textsuperscript{31} Joseph Henry and University of the State of New York, \textit{On a Disturbance of the Earth’s Magnetism: In Connexion with the Appearance of an Aurora Borealis} (Albany: 1832), 2.
\item \textsuperscript{32} SI Archives RU 7001, Box 7, Folder 9.
\item \textsuperscript{33} Reingold, \textit{The Papers of Joseph Henry}, 1:177-178
\item \textsuperscript{34} SI Archives RU 7001, Box 28, Folder 9. These donations are also discussed in Reingold, \textit{The Papers of Joseph Henry}, 3:16, where the editors suggest this fundraising prepared Henry for the Smithsonian.
\item \textsuperscript{35} SI Archives RU 7001, Box 28, Folder 9; Reingold, \textit{The Papers of Joseph Henry}, 1:305-312.
\end{itemize}
Donations for the purchase of “Philosophical Apparatus” for the Academy Laboratory in 1830. This list tellingly includes Gideon Hawley, William James, and Stephen Van Rensselear. *Smithsonian Institution Archives, Record Unit 7001, Box 28, Folder 9.*

It’s difficult to express the degree to which Albany was completely defined by innovation. The Erie Canal was completed in October 1825, and by August 1831 the Mohawk and Hudson Railroad Company ran one of the first steam passenger trains in America. But this moment in Albany was by no means limited to technological breakthroughs, even if engineering was the city’s driving force. Governor Martin Van Buren invented the first “political machine.” (His son John was enrolled in the Academy). Long-time member of the Board of Trustees, William James, became the second wealthiest man in America as an importer who “introduced a number of marketing innovations.” (His son Henry James Senior was also enrolled in the Academy. And

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his younger son Edward was in Melville’s class). Stephen Van Rensselaer, “the leading figure and a major financial supporter of the Academy-centered scientific circle,” has been described as “the first great patron of science in America.” And Melville, it turns out, was part of this world.

Most of us are familiar with Melville’s less-than-auspicious beginnings. “As a child, Herman was slow to talk and even slower to read,” especially compared to his older brother, Gansevoort. When he started school, “according to his mother, he did ‘not appear so fond of his Book as to injure his Health.’” The next year, when he was six, he entered the New-York Male High School. It was “set up according to the Lancastrian or monitorial system, a hierarchical pedagogy based on rote memorization, shame, and fear.” “This strict, often abusive educational regimen had a negative effect on the boy. He had trouble learning to read and write, and he never quite mastered handwriting and spelling.” And by the time he was seven, his father sent him to Albany to spend the summer with his Uncle, Peter Gansevoort—unforgettably describing him as “‘very backward in speech and somewhat slow in comprehension.’”

37 William James was the second richest man in America when he died in 1832. He served as a Trustee of the Academy from 1818-1832 and presided over the board from 1826-1832. James made a fortune pledging to always have certain goods on hand and accepting credit—then investing in land out West and then railroads. Of course James was also the progenitor of one of America’s most famous families. Henry James Senior met Joseph Henry at the Academy, and at different moments Henry was James’ classmate, his tutor, a familiar face at Princeton, a patron, and, eventually, a close friend. Years later Henry James Jr. celebrated his father’s “cherished, anecdotic” relationship with his brilliant “benignant tutor.” See Albany Academy, Historical and Financial Summary of the Albany Academy, 48, 52; Alfred Habegger, The Father: A Life of Henry James, Senior (Amherst: University of Massachusetts Press, 2001), 15-16, 65; Reingold, The Papers of Joseph Henry, 3.28, 4.105, 4.181. For Edward James as Melville’s classmate see Gilman, Melville’s Early Life and Redburn, 57; Albany Academy Trustees, Notes and General Records.

38 Rensselaer was the founding member of the Board in 1813, and he gave $1250 for the Academy (the largest donation, by far). Henry tutored his children. And Melville was loosely related to him by way of the Gansevoorts. Hershel Parker posits that “however little else they knew of their Dutch ancestry, Maria Gansevoort Melvill’s children knew from earliest childhood that she was a cousin of the grandest living New Yorker of all, Stephen Van Rensselaer.” But for Parker this must have increased Melville’s sense of alienation in the face of his family’s poverty. Gilman offers, conversely, that Melville knew he belonged to “the caste that included statesmen and wealthy landowners” and was “aware of the distinction it furnished.” Albany Academy, Historical and Financial Summary, 15, 18; Gilman, Melville’s Early Life and Redburn, 48; Parker, Herman Melville: A Biography, 1:3, 81, 134, 156; Weiner, “Joseph Henry’s Lectures,” 14, 16.


This is where the story changes. Melville’s trip to Albany was in the summer of 1826, and Allan reported to Peter that he returned, “much improved by his visit in mind, person, and estate,” having developed “the most affectionate attachment to his Grandmother and Uncle.” Peter found him quite delightful and described him to Allan in “very flattering terms,” adding that Melville had gained his “patronage and instruction,” which continued throughout Melville’s life. Melville spent the next few years slowly building on this success. First he earned a “best Speaker commendation” for examinations at the New York Male High School. Then he became a monitor, appointed to help teach younger students. And by the time he was ten, at “the prestigious Columbia Grammar School,” even his father acknowledged: “Herman I think is making more progress than formerly, and without being a bright Scholar, he maintains respectable standing.” At this point Melville was, in the words of his father, his Uncle Peter’s “little protégé.” And while his father may have damaged the family name (along with Melville’s self-esteem) a positive recommendation from Peter Gansevoort would have made a difference in Albany.

Just a few weeks before Melville’s visit in 1826, Peter Gansevoort had been engaged in a very different task: serving on the Board of Trustees of the Albany Academy when Joseph Henry

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41 By July 1832, when his family left town during a cholera outbreak, Melville lived with Peter to keep his position at the New York State Bank. And Gilman even goes so far as to suggest that Peter helped his sister and children repeatedly, even when it “brought him to the verge of bankruptcy” himself. Peter’s patronage of Melville certainly continued, and in 1876 Herman dedicated his final published work, Clarel, to Peter. Leyda, The Melville Log, 27, 54; Gilman, Melville’s Early Life and Redburn, 50.

42 Melville’s father was a stockholder and one of twenty-five trustees at the New York Male High School. Gilman, Melville’s Early Life and Redburn, 28; Parker, Herman Melville: A Biography, 1:39, 42; Robertson-Lorant, Melville: A Biography, 40.

43 Leyda, The Melville Log, 43. Melville moved to “the prestigious Columbia Grammar School” in September 1830. The New York Male High School’s fees ranged from $3.25 to $7.50. But at Columbia Melville’s fees were either $10 or $12 each quarter, which is one way to mark Melville’s rise (at least in terms of prestige). John Runden, “Columbia Grammar School,” Melville Society Extracts 46 (May 1981); Parker, Herman Melville: A Biography, 1:47; Robertson-Lorant, Melville: A Biography, 42; For more on Melville as a monitor see AM to PG Feb 10, 1827. For more on Melville’s time at Columbia Grammar, see The Columbia Grammar School: A Historical Log, 8-10.

was elected and appointed Professor of Mathematics and Natural Philosophy. And the year before he had been one of twelve members of the New York Board of Regents to vote for the establishment of the Academy’s groundbreaking meteorology project. Peter was also the attorney for the Academy. He kept the school’s account book. And by the time Melville returned to Albany in 1830, Peter was both a member of the New York State Assembly and the Secretary of the rapidly developing Albany Institute, which was celebrating its first anniversary. Beck, the Principal of the Academy, was Vice President. Henry was the Librarian. And in a one thousand-person organization, there were only six other members of the Board. So it’s no surprise that, upon moving to Albany, Herman and his brother Gansevoort attended the Academy, along with their cousin Stanwix. And Melville didn’t enter the Academy as just any student. In addition to “belonging to the patrician class of Albany,” he was, in the words of his father, the “little protégé” of the Academy’s attorney, its accountant, a board member, and a friend.

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45 SI Archives RU 7001, Box 28, Folder 8; Reingold, *The Papers of Joseph Henry*, 1:132, 162. Interestingly enough, Henry was appointed four days after his predecessor, long-term Tutor Michael O’Shaunessy, was chased out in a sex scandal. “Letters and Trustees Reports on the O’Shaunessy Affair,” Weiner, “Joseph Henry’s Lectures” 21. *Joseph Henry Papers Project, The Albany Academy X-90*. Peter Gansevoort was the newest member of the Board at the time. He was elected July 18, 1825 and served until 1876. This was the longest run of any member of the Board for at least 100 years, and he served as its chairman from 1855-1876. He was, in short, a major figure in the history of the Albany Academy. See Albany Academy Trustees, *Notes and General Records; Albany Academy, Historical and Financial Summary of the Albany Academy*, 49, 52. For Melville’s visit, see Parker, *Herman Melville: A Biography*, 1:35.


47 See “A Memorandum Book of Unsettled Accounts of the Albany Academy,” Gansevoort-Lansing collection, Manuscripts and Archives Division, The New York Public Library. This is also mentioned in Gilman, *Melville’s Early Life and Redburn*, 308.

48 Albany Institute, *Transactions of the Albany Institute* (Albany: Webster and Skinners, 1830): 2


50 Peter was involved enough in the scientific community to be referenced five times in the Albany volume of Reingold’s *The Papers of Joseph Henry*, 74, 93, 106, 132, 162. He was an “avowed Jacksonian” who was successful enough to become a State Senator with a place in the Albany Regency. Hershel Parker, *Herman Melville: A Biography*, 1:66. And he was socially successful as well. Peter and his brother Herman Gansevoort built and owned Stanwix Hall, where Albany’s elite parties, balls, and soirees were held. *Melville’s Early Life and Redburn*, 47. Interestingly enough, Peter was also one of four members of the Board’s “Committee on Premiums in the various branches of study”—and thus one of the examiners when Melville won his award. Albany Academy Trustees, *Notes and General Records*. 

58
Melville’s Course of Study at the Albany Academy

In the Fall of 1830, Melville, who was eleven years old, is said to have started the “standard preparatory course in the Fourth Department,” or the Academy’s elementary school. This was a new program, and a year into its existence, it was dramatically successful. Its primary goal had been to draw younger pupils into the Academy, and only one month after it was announced, the program had outgrown its space. “The number present in the fourth department was 78 and the room would hardly be sufficiently large for them during the ensuing winter.” Meanwhile the second goal of the new program was to take pressure off of Beck and Henry, who held the apparently timeless belief that their teaching loads were excessive. Luckily, that didn’t go as planned. Enrollment rose dramatically. So Henry shared, in response to the offer from Princeton in 1832: “I am engaged on average of seven hours in a day one half of the time teaching the higher classes in Mathematics, and the other one half in the drudgery of instructing a class of sixty boys in the Elements of Arithmetic.” So while Melville’s “teacher for regular subjects” in the Fourth Department was Henry’s assistant, George Washington Carpenter, Henry also seemed to be teaching these students. And he gave elementary pedagogy a surprising amount of consideration, despite the fact that this was by no means his favorite class.

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51 Melville is often placed in the Fourth Department. See Leyda, The Melville Log, 45; Titus, David K., “Herman Melville at the Albany Academy,” Melville Society Extracts, no. 42 (May 1980): 6. This may not be accurate, as I will discuss.

52 SI Archives RU 7001, Box 28, Folder 1; The Academy Trustees published an even stronger suggestion in the Albany Argus: “it will greatly relieve the mathematics professor” who is unable to “satisfy his own laudable ambition” while also attending to more than 160 recitations each day. Henry often taught about 16 sections, with 4 to 15 students in each course. Albany Academy Trustees, Notes and General Records, Albany Argus, August 19, 1829; SI Archives RU 7001, Box 28, Folder 8 & 9.

53 SI Archives RU 7001, Box 7, Folder 9

54 Reingold, The Papers of Joseph Henry, 1:299n. Carpenter’s official position was “Tutor,” and, in fact, he was a new Tutor in 1830—and not especially distant from his own time as a student. See Albany Academy, Historical and Financial Summary of the Albany Academy, 54; Albany Academy Trustees, Notes and General Records. Newspaper records from various memorial services also frame Carpenter as
The course of study in the Fourth Department also required work in Geography and Natural History. And Henry, despite his focus on electromagnetism, was very invested in developing the curriculum in these two disciplines. He wrote a detailed letter to the Academy Trustees in 1829, as the program was being developed, explaining that “natural philosophy, astronomy, the use of globes, and physical geography” “should be considered the most prominent objects of attention during the first year of the Educational course,” or work in the Fourth Department. And Henry was very invested in these topics. During his Albany years, “Henry was reading works on the geographic distribution of plants and animals and on the interpretation of the fossil record,” including “works we now recognize as important steps to Darwin’s *Origin of Species*.” In the Albany Institute, he and Beck were discussing Cuvier. And “natural history” was somewhat broadly construed. For example, Beck described meteorology as “the natural history of the atmosphere.” Whatever it entailed, Henry was more than qualified. Not surprisingly, given his future with the Smithsonian, he was an avid collector of artifacts, both personally and as a curator for the Albany Institute. Finally, while Henry is often listed as chair of “mathematical science,” his official title was “Professor of Mathematics and Natural Philosophy.”

Henry’s assistant, whose tasks included hanging the wire for Academy “telegraph” experiments—after winding yarn around it for insulation. SI Archives RU 7001, Box 43, Folder 18. Carpenter was trained as a civil engineer and went on to be a surveyor for the City of Albany. *Melville’s Early Life and Redburn*, 54.

See, for example, Henry’s account of choosing textbooks for “boys 10 or 11 years old.” He explains, in a letter to Charles Daivies at West Point: “I do not expect that you will entirely agree with me… but you must recollect that we have to deal with children and not young men… who cannot work a problem of any considerable length.” SI Archives RU 7001, Box 7, Folder 9; Reingold, *The Papers of Joseph Henry*, 325.


Reingold, “The New York State Roots,” 143. (Henry’s infamous resistance to the development of a National Museum was not resistance to Natural History in general).

Henry offered regular courses in Arithmetic, Algebra, Geometry, Calculus, and Architecture—along with occasional courses in “Arithmetic and Measuring,” “Architectural Drawings,” “Projecting Maps,”
The entirety of the Fourth Department curriculum—beyond “The Elements of Arithmetic,” “Geography,” and “Natural History”—covered “Reading and Spelling,” “Penmanship,” “Irving’s Catechisms,” and “English Grammar.” On Friday afternoons students were also instructed on “orthography, pronunciation, the correct reading of English Prose and Verse, and in Elocution.”

The Academy’s Statutes offer a full list of the books that were used in 1834:

- Pierpont’s Young Reader
- Hazen’s Speller and Definer
- Colburn’s First Lessons, with examples for practice
- Bullion’s English Grammar
- Woodbridge’s Abridgment of Geography
- Trimmer’s Natural History
- Irving’s Catechisms of Universal, Grecian, Roman and English History, Classical Biography, and Jewish Antiquities
- Webster’s School Dictionary
- Beauties of the Bible (as a Reading Book)
- Olney’s Geography
- Hart’s Geography
- Goodrich’s Malte Brun’s Geography
- Daboll’s Arithmetic
- Parker’s Progressive Exercises in English Composition

This list gives us an incredibly good sense of what Melville may have studied. (Books didn’t change often. In fact, every new text required approval by the Board, and changes are carefully debated and detailed in the Trustees’ notes). In 1829 the curriculum also included “Biblical History,” Natural History was specifically “abridged,” Geography only used Woodbridge’s “smaller” text, and Arithmetic was limited to Colburn’s First Lessons. But by February 1831 it was clear things had to change. Beck informed the Board that after eighteen months several students in the Fourth Department had completed their course of study in both Geography and


63 Albany Academy, Statutes of the Albany Academy 1834, 16-17.

64 The Academy’s Statutes explain: “no book, except those contained in the preceding Catalogues, shall be taught at the Academy without the permission of the Board. And Trustees’ notes include substantial letters by Henry and Carpenter requesting changes. Albany Academy, Statutes of the Albany Academy 1834, 18; Albany Academy Trustees, Notes and General Records.
Arithmetic. So they needed to pass into the higher departments, unless “some provision was made.” Board members authorized Beck to introduce Daboll’s *Arithmetic* and another Geography text for the department’s “higher students.”

But there are no indications of other substantial changes between 1831 and 1834, with one very notable exception. Until Bullions’ book was printed in 1834, students made use of Murray’s *Grammar*. This should come as no surprise to readers of *Moby-Dick*, who remember Pip’s brilliant declaration—“I look, you look, he looks, we look”—in response to “The Doubloon,” when we learn, in turn, quite memorably: “Upon my soul, he’s been studying Murray’s Grammar! Improving his mind, poor fellow!”

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Daboll’s *Schoolmaster’s Assistant* expanded to include *The Practical Accountant*. Photograph courtesy of Harvard Libraries.

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65 Albany Academy Trustees, *Notes and General Records*.

Henry wasn’t always pleased with the Academy’s textbooks. For example, he explained that he could only use the textbook for Melville’s ciphering course, Daboll’s *Schoolmaster’s Assistant*, “as a book of examples, as indeed it is good for nothing else.” And Melville, it seems, may have felt the same way. At least Stubb declares, in *Moby-Dick*: “I have heard devils can be raised with Daboll's arithmetic.” This attitude was no surprise, given descriptions of the Academy’s arithmetic classes: “Students laboriously copied theorems, examples, problems to be solved, and other notes from whatever textbooks were available.” Then they “memorized their lessons” and “‘cited’ and ‘re-cited’ for the teacher or the monitor,” for about “half an hour per subject per day.” As Henry described a standard lesson: “almost every abstract principle of arithmetic as taught in the Academy is given from the mouth of the teacher to each class accompanied with illustrations on the black board.” Then each “pupil is required to commit to memory all the rules and is drilled upon the practice of them until he is quite expert.” In recitations students were “questioned.” Then they were given a few pages of “practical examples” to “work out.” Afterwards, Henry was “in the habit of giving each class… several hundred extra examples,” many of which had to be reexamined as homework.

67 Unfortunately, with the exception of Henry’s “Lecture Notes on Magnetism and Electromagnetism,” we can only speculate about what his courses may have covered—or work, as Weiner has, to great effect, with a number of student notebooks. Despite his role as “the leading American physicist of the period”—and the fact that his courses “deviated rarely”—Henry never wrote a textbook at a time when this was common. He viewed the practice “as an extracurricular commercial venture” and opted, instead, to spend “his precious time outside the classroom” on research. Charles Weiner, “Joseph Henry and the Relations Between Teaching and Research,” *American Journal of Physics* 34, no. 12 (1966): 1095; Swartz 350.

68 Henry also elaborates: “the principles of the science and the explanation of the rules are given after the manner of Hasler and Colburn.” And additional examples are selected from Bonnycastle, Hutton, and others. Reingold, *The Papers of Joseph Henry*, 1:326, 288.


In the Fourth Department there was also extensive work with “mental arithmetic” drills.\(^{72}\) Henry advocated “rote drilling in arithmetic as the principal and prominent object of the primary or common school.” In fact, Henry was known to insist that his “first object teaching arithmetic” was to make every student an “expert accountant.”\(^{73}\) But for Henry these memorization drills weren’t limited to multiplication tables or even simple concepts. He also required younger students to read all of Euclid four times, “to be sure the pupils had caught all of importance with the subsequent readings,” reinforcing their learning through repetition—and with the hope that, as they developed, they could fully appreciate the beauty of Euclid’s language and his proofs.\(^{74}\)

Luckily for Melville, Henry made major curricular changes during his time at the Academy. The older recitation model, where students were drilled and reviewed until they memorized brand new material was replaced with a ciphering model, which seemed infinitely more manageable. So by the time Melville won his book award for this new practice of “ciphering books,” Henry’s students would spend an hour on new lessons every afternoon. Then for two hours they would work problems to reinforce those new lessons, examining homework or entering completed, checked work into their ciphering books. With the old model, daily rankings were based on recitations, or students’ ability to apply a new lesson in public without practice. But the new

\(^{72}\) The timing of students’ progress from “mental arithmetic” drills to an understanding of broader mathematical principles isn’t entirely clear. Henry wrote to Davies that “Arithmetic is taught in the Academy to boys from 6 to 12 years of age,” but he also explained that boys are repeatedly “drilled in the first four simple and compound rules” before entering Henry’s department, “and until this time they require no arithmetic except for learning the tables.” Reingold, *The Papers of Joseph Henry*, 1:299

\(^{73}\) This comes from a letter to Prof. Charles Davies at West Point in 1831. Here Henry demonstrates the degree to which he’s seriously considered teaching “children and not young men.” He explains that for “boys from six to twelve years of age,” or the Fourth Department, Arithmetic “is first primarily taught as of an *art*, the pupil is required to commit to memory all the rules and is drilled upon the practice of them until he is quite expert. As he becomes more advanced in years the *rationally* of the rules is more dwelt upon. Reingold, *The Papers of Joseph Henry*, 1:325; SI Archives RU 7001, Box 7, Folder 9. Henry also speaks, in his Philosophy of Education address, about “the art of the accountant.” Joseph Henry and Arthur P. Molella, “The Philosophy of Education,” in *A Scientist in American Life: Essays and Lectures of Joseph Henry* (Smithsonian Institution Press, 1980), 83.

\(^{74}\) Swartz, “Joseph Henry: America’s premier physics teacher,” 355. Even for students so young that this wasn’t possible, Henry found that “the principles of rule may be partly explained or demonstrated by a boy who cannot work a problem buyer of any considerable length.”
model gave students the opportunity to process each lesson by working problems alone—and made it much easier to “obtain assistance when necessary.” Homework problems prepared in “blank books” helped students review—and shaped their grades. Then, once a lesson was completed and mastered, students entered corrected work into their ciphering books, which became personal reference manuals in a moment when textbooks were far from affordable.75

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We can’t be sure of whether Melville stayed in the Fourth Department for the Fall of 1831. The elementary school was intended to be for boys aged six to twelve, who were still unprepared for the school’s senior programs. Only three of the boys were twelve, and Melville had already spent quite a bit of time in school.76 This possible change in Melville’s academic standing is especially intriguing when we add that Henry also taught courses in “Navigation and Surveying” to more senior students.77 (Melville was certified as a surveyor in 1838, and he alludes to Bowditch’s Practical Navigator, which was the textbook for the program).78 But in any of the Academy’s upper-division departments, Henry would have continued to be Melville’s mathematics professor.

Here it’s worth noting that a surprising amount of critical attention has been dedicated to speculation about Melville’s placement in the Fourth Department—and whether he would have moved on. Gilman suggests that Melville’s “placement in the lowest department bears out his

75 Titus, “Herman Melville at the Albany Academy,” 7; Albany Academy Trustees, Notes and Records. Most of this information comes from Fourth Department Tutor William Carpenter, who offered a report to the Board that outlined a standard school day in 1832. Classes seem to have had three components: lessons, recitations (where students were drilled and reviewed), and problems to work for the next day. The morning was “occupied with Geography; Reading & Spelling; writing; Grammar & Parsing,” and the student who “pursues all these branches of study” would spend almost two hours in recitations. In Geography that might cover material form lessons about two states or one European country. And in grammar they might focus on conjugating verbs. The Afternoon was “entirely devoted to Arithmetic.”

76 Gilman, Melville’s Early Life and Redburn, 54.

77 SI Archives RU 7001, Box 28, Folder 8

78 Herman Melville, Moby-Dick, 135; Reingold, The Papers of Joseph Henry, 1:55, 301.
father’s judgment of him.” (He was, after all, supposedly “backward” and “slow”). And the school’s listed admissions categories were also based on parents suggesting “what branches of learning” each student was to be taught. (This was a world before placement exams). So it’s entirely possible that Melville’s original low placement was because of his father. But that doesn’t necessarily imply that his performance was a factor. Herman and Gansevoort arrived after the midpoint of a three-month term that began September 1, which obviously could have led to conservative placement.

Given the family’s dire financial situation, cost also seems to have been a determining factor. Tuition was $28 to $32 for the Second Department (Classics) and $20 to $24 for the First and Third Departments (English and Mathematics). But in the Fourth Department (Elementary) tuition was $16 per year for Melville’s course in “Arithmetic, English Grammar, and Geography” — and only $12 per year “for the remaining studies.” It seems telling that Melville was enrolled for the Academy’s most affordable course of study. Allan Melvill may not have been willing or able to pay the extra tuition for Herman.

David Titus is especially helpful when he reminds us that a lack of curricular standards was also a factor when Melville changed schools. When the Fourth Department was formed the Academy developed new policies and standards. So to enter at any higher level, students had to be proficient in reading, writing, grammar, and arithmetic — and they had to have “studied, in the

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80 Albany Academy Trustees, *Notes and General Records*.
82 Titus draws our attention to the totally different structures at the Albany Academy and the New-York Male High School. One was an Academy, chartered by the Regents. The other was a Lancastrian or Monitorial School, which means that “faculty taught student monitors, who then instructed other pupils,” conducting their recitations, or drilling them in sums and spelling. Melville had been one of these monitors for four years, which presumably hindered his progress. In fact, “by 1831 the New-York Male High School had failed because of the difficulty of adapting the monitorial method to the higher subjects.” There was, it seemed, a ceiling. Titus, “Herman Melville at the Albany Academy,” 4-6. Unfortunately this portrays Melville as transferring in from the New-York Male High School, when, in fact, he was coming from Columbia’s Grammar School. (Eventually I would like to add more about the Columbia Grammar School, beyond the *Historical Log*, with the help of material on its curriculum at the New York State Library).
This means, of course, that instead of being a traditional Fourth Department student, like his younger brother Alan, we might think of Melville as a student who spent time working to satisfy different requirements. If we turn to the Academy’s register of students, for example, we might notice that Melville’s course of study was specifically in “English Grammar, Arithmetic, and Geography.” But less than a year later, Melville’s younger brother Allan—student 1152—was admitted to the “Fourth Department,” which seems to indicate at least some difference in their courses of study.

### Registration information for Herman and Allan Melville
**Albany Academy Trustees’ Notes and General Records.**
**Albany Academy Repository, New York State Library.**

**1092. Herman Melville**
Admitted October 15, 1830
English Grammar, Arithmetic, Geography
Dismissed October 1831

Admitted Sept 1. 1836.
Latin Language.
Dismissed March 1. 1837.

**1152. Allan Melville**
Admitted June 1. 1831. 4th Department
Dismissed Dec 1. 1831
Admitted June 1. 1832 4th Department
Dismissed Dec 1. 1833.

Admitted Sept 1. 1836.
Latin Language. Arithmetic.
English Grammar
Dismissed June 1. 1837.
Aged 8. 7th April. 1831.

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83 More detail is available and laid out by the Board of Regents: “no students, in any such academy, shall be considered scholars in the higher branches of English education, within the meaning of this ordinance, until they shall, on examination duly made, be found to have attained to such proficiency in the arts of reading and writing, and to have acquired such knowledge of the elementary rules of operations of arithmetic, commonly called notation, addition, subtraction, multiplication and division, as well in fractions as in whole numbers, together with such knowledge of the parts of arithmetic commonly called reduction, practice, the single rule of three direct, and simple interest, as is usually acquired in the medium or average grade of common schools in this State; and until they shall also, on such examination, be found to have studied so much of English grammar as to be able to parse correctly any common prose sentence in the English language, and to render into good English the common examples of bad grammar given in Murray’s or some other like grammatical exercises; and shall also have studied, in the ordinary way, some book or treatise in geography, equal in extent to the duodecimo edition of Morese’s, Cumming’s, Woodbridge’s, or Willett’s geography, as now in ordinary use.” New York Board of Regents, Instructions from the Regents, 24. Also see Franklin Benjamin Hough and David Murray, Historical and Statistical Record of the University of the State of New York (Weed, Parsons & company, printers, 1885).

84 Ideally I would like to get a much better image from the Academy Archives. And I would like to add images of the entries for Allan Melville and Edward James as well. (William James Senior’s youngest son was notably the first person to enroll after Melville. But I will need to make a trip to Albany to do that.
In light of this careful look at his records, we might ask whether Melville was formally enrolled in the Fourth Department at all. His particular combination of fields of study was actually quite common. In fact, half of the ten students to enroll just after Melville, whose ages ranged from eight to sixteen, were scheduled to study “English Grammar, Arithmetic, and Geography.” Presumably some of these students took Elementary courses, but others weren’t eligible, since the program had an age limit. And here it’s also important to remember that this was by no means a system that worked in terms of the rigid grade levels we might be inclined to imagine today. Students weren’t required to attend school, illness was far more prevalent, and standardized testing was decades away. With four terms each year, it was quite common to enroll and then return to the Academy for all sorts of reasons. In fact, the student enrolled just after Melville—“1092. Edward James”—shows two admissions and dismissals, despite being the son of a millionaire in a storied family that valued education. And the student who enrolled just before Gansevoort—“1089. John Gibbons”—left and returned three different times.

Courses of study were also flexible enough to make formal categories all but irrelevant. The Principal could “remove students from lower to higher classes, and vice versa, according to their standing and proficiency.” And students are listed for as few as one (often Arithmetic) and as many as five subjects. Even within programs, things were open-ended. For example, some classics students worked on other subjects for several hours every day, some turned to mathematics on alternating days, and others never did any arithmetic at all. These schedules were incredibly personalized. To give a better sense of scope: the school had about 250 students, and on average there were ten tutors and members of the faculty. So the student-faculty ratio was about 25-to-1.85 Grade levels were flexible, course schedules were fluid, and frequent entrances and exits from various schools were by no means uncommon.

85 Albany Academy Trustees, Notes and General Records; Albany Academy, Statutes of the Albany Academy 1834, 4, 16; Historical and financial summary of the Albany Academy, 1813-1913, 54.
That being said, if Melville formally entered the Third Department for Mathematical Sciences or the school’s four-year vocational Mercantile Program, then Henry would have overseen his work and academic progress. And Gilman speculates that Melville “may have undertaken the classical course,” which was the most expensive track, but “it is more possible that his father, convinced of his bent for commerce, placed him in the mercantile course.” This is an especially intriguing possibility. The shorter mercantile program placed a clear emphasis on skills like “bookkeeping and mercantile arithmetic,” along with the possibility of enrollment in Henry’s courses in physics, mechanics, and astronomy.

Mercantile Course

First Year

English Studies. Geography.
The English Language, including Grammatical Reading, Declamation and Composition, particularly Letter Writing.

Mathematical. Arithmetic, Physical Geography.

Second Year

English Studies. History in general.
Constitution of the United States, and Constitution and parts of the Statutes of this State.
English Studies continued as above.
Mathematical and Mercantile Studies. Arithmetic continued, Algebra begun.

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87 Gilman, *Melville’s Early Life and Redburn*, 57.

This mathematical orientation may not have been the stretch that some Melville enthusiasts might be inclined to imagine. Melville was by no means destined for a career as an author at the time. When he was nine, Melville was studying “Geography, Gramar [sic], Arithmetic, Writing, Speaking, Spelling, and”—most importantly, at least for my purposes—he “read in the Scientific class book,” which was by no means standard.\(^9\) By the time he was ten, Melville’s father believed he had “chosen Commerce as a favorite pursuit.” And here Robertson-Lorant offers a potentially overdetermined suggestion: “Herman’s professed interest in commerce must have been a bid to gain his father's approval, as he showed little interest in it later.”\(^9\) But the very next year, after moving to Albany, Herman won his allegedly surprising award for ciphering books. To be clear: this was, essentially, an award for addition, multiplication, and practical problem solving. Melville “led his class in mathematics and bookkeeping” at the best school in the state.\(^9\) In fact, “Daboll’s Arithmetic” included surprisingly difficult problems on topics like annuities, brokerage, commission, discount, and other topics related to accounting.

A number of critics have downplayed this particular achievement. For example, Gilman explains: “from the presentation notice pasted inside the cover reading, ‘Herman Melville, first best in his class in Ciphering Books,’ he carefully scraped the last two words” because “no one was to know that he had ever won a prize for such useful knowledge.”\(^9\) This is a tempting fantasy. But surely other speculative possibilities emerge: he was the first best in the class, without qualification. He had a really bad day at the bank. Or he was frustrated when he couldn’t get work as an accountant or a surveyor and found himself going to sea. The Log, more reliably, simply describes these words as “later effaced.”\(^9\)

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\(^9\) See image on page three of this chapter. Gilman, *Melville’s Early Life and Redburn*, 56.

One anecdote, in particular, draws out a very different perspective on Melville’s engagement with literature and science during his time at the Academy. Melville’s literature textbook was *Murray’s English Reader*. But instead of serving as the sort of conduit to Melville’s formative engagements with fiction that we might be inclined to hope for, the 300-page “volume contains only one marking” other than his name. And Melville’s only annotation is ultimately about storms: a central scientific preoccupation at the Academy at the time. “A penciled line in the margin” drew attention to this verse from Thomson’s “Hymn on a Review of the Seasons”:

Thy bounty shines in *autumn* unconfin’d,
And spreads a common feast for all that lives.
In *winter*, awful Thou! With clouds and *storms*
Around thee thrown, tempest o’er tempest roll’d,
Majestic darkness! On the *whirlwind’s* wing,
Riding sublime, though bidst the world adore;
And humblest nature with they *northern blast*.
*Mysterious round!* What skill, what force divine,
Deep felt, in these appear.94

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Gansevoort-Lansing Collection, Manuscripts and Archives Division.

94 Gilman, *Melville’s Early Life and Redburn*, 307, or Melville’s copy of *The English Reader; or, Pieces in Prose and Poetry* by Murray (1819).
Science at the Albany Academy

As space was reallocated for the new Fourth Department in 1829, “the rooms in the Basement Story on the North Side were consigned for a lecture room and laboratory.”\(^{95}\) And a “Descriptive Catalogue of Philosophical Apparatus Purchased for the Albany Academy” suggests that Melville would have discovered a remarkable collection. There are thirty-two entries for purchases made in 1830 alone, many of which, as I’ve explained, were funded by donations. These tools included an electrical machine that was “the greatest in diameter of any in this country,” “an electrical battery consisting of nine half-gallon [Leyden] jars,” a “whirling table,” and “the most perfect hygrometer ever invented.” There was also a “portable wooden case containing 72 wide mouth bottles with specimens.”\(^{96}\)

Catalog of Philosophical Apparatus purchased for the Albany Academy (selected entries)

- Achromatic Dolland Telescope
- Leslie’s Differential Thermometer
- DeWitt’s Conical Rain Gauge
- Most perfect Hygrometer ever invented
- Electrical Battery consisting of 9 half-gallon jars
- Electrical machine, greatest in diameter of any in this country
- Large working model of Hydraulic Dam
- Modification of the Whirling Table
- Apparatus demonstrating reciprocating motion
- Paradoxical balance to show the absurdity of a self-moving machine

The Academy’s collection actually seems to have “compared favorably with collections at leading American colleges.” (West Point had the best lab, by far, and the articles in Henry’s “Catalogue” were similar). This makes sense for several reasons: Henry’s and Beck’s research, the school’s atypical tracks for mathematics and science, and the fact that the courses were, truly, “college level.” Henry’s model was Yale, and after a visit to Benjamin Silliman’s lab, he

\(^{95}\) SIA RU 7001, Box 28, Folder 1
\(^{96}\) SIA RU 7001, Box 28, Folder 9; Reingold, *The Papers of Joseph Henry*, 1:305-311
“acquired many of the same items for his classes at Albany.” But the school’s holdings were impressive before this campaign. In 1827, Asa Fitch, an entomologist at Rensselaer, offered a helpful portrait: The cabinet had an extensive collection of Minerals, “a considerable number of shells,” 300 insects, and other “specimens of the soils.” Fitch continued, “the Laboratory would contain a large audience.” “Our Chemical apparatus could not compare with what is here.” And “the School Library contains a considerable number of books.” By the start of 1832 the worth of the Academy’s “Library, Philosophical and Chemical Apparatus” was listed at $1,550.

The curriculum included Henry and Lewis Beck’s “Lectures on Chemistry and Physics,” which were open to the public. These “lectures and experiments” were an important part of the school’s traditions and were very well attended. In fact, these lectures, “being held in the evening, were favored with the presence of young ladies as well as young gentlemen.” They required “tickets of admission.” Families received discounts. And chemistry students got in free.

These lectures would have been engaging and dynamic. Henry, it turns out, possessed a remarkable sense of how to please a crowd. Notes from his first year at Princeton, for example, describe him stretching wire across campus and then using a tiny battery to produce different

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98 Reingold, The Papers of Joseph Henry, 1:182, 398. A full catalogue of the Academy Library was drawn up in 1829 and is in the minutes of the Academy Trustees. The library was 1400 square feet and almost full. Henry also produced a catalogue of 682 selected volumes, Albany Academy Trustees, Notes and Records; Albany Academy, “Collections relating to the Albany Academy,” Gansevoort-Lansing Collection, New York Public Library (New York). Reingold, Papers of Joseph Henry, 1:220.

99 At one point, Henry apologizes for a delayed response to Charles Davies at West Point by explaining, “besides the ordinary duties of the Academy, which require about seven hours daily,” he and Beck were “giving a course of Lectures on Chemistry and Physics.” SIA RU 7001, Box 7, Folder 7

100 Leyda, The Melville Log, 46. These lectures were also fondly remembered at the Academy’s Anniversary in 1863. Here see Albany Academy, Celebration of the Semi-centennial Anniversary of the Albany Academy: Albany, June 23, 1863 (Albany: J. Munsell, 1863), 5, 48.

101 Reingold, The Papers of Joseph Henry, 1:50. A recurring advertisement in the Albany Argus in 1832 announced: “Lectures on Chemistry—A Public Introductory will be delivered at the Laboratory of the Albany Academy, on Tuesday evening at 7 o’clock. The course will consist of 16 lectures. Terms—For a single ticket $3. Lady and gentleman $5, &c. As no subscription paper will be circulated, those desirous of attending may put down their names at the lecture room.” Prices were for the entire course of lectures.

effects across campus—like ringing campus church bells from several miles away.  

And Henry’s showmanship was clearly developed in Albany, where his lectures were reportedly both memorable and inspiring.

Patrick Smyth, who was a classmate of Melville’s in the Fourth Department, sent a reminiscent note to this effect years later, as part of Henry’s memorial in 1897:

Henry alternated with Dr. Beck in weekly lectures on chemistry in the laboratory of the academy. On one occasion he exemplified the action of electricity on locomotion; as I now recollect, a small galvanic battery of alternate sheets of zinc and copper wire... was connected with the car on a circular railroad of diminutive dimensions. It was a perfect success, and all were amazed at the wonderful power transmitted. I believe it was the first application of electrical power to locomotion; at least among the pupils it was so understood.

Smyth added in a second letter: “what I recall, which is indelibly impressed upon my memory, is that in a lecture of Prof. Henry's in the lecture room of the Albany Academy, he illustrated the energy of electricity and magnetism, by propelling a car upon a miniature circular railroad, to the amazement and delight of the pupils.” This seems to have been the first model train set, when only five years earlier the Mohawk and Hudson Railroad made the first run powered by an engine in the U.S.—departing from Albany, of course.

Melville was only twelve when these lectures and demonstrations took place. But the former student who remembered the railroad, Patrick Smyth, was only nine or ten. And Smyth was tellingly able to reconstruct facts about how the apparatus was structured and may have worked, fifty years after the fact. So it seems entirely possible that Henry’s groundbreaking discoveries—along with his dramatic presentation style—could have left a lasting impression on Melville.  


104 SIA RU 7001, Box 27, Folder 18. Smyth enrolled in 1828. Albany Academy, Historical and Financial Summary of the Albany Academy, 73. He signs his letters H.S. Smyth.

105 Henry was certainly well-known as “a favorite with the pupils.” Albert E. Moyer, Joseph Henry: The Rise of an American Scientist, 69. In fact, Charles Weiner, whose career was built writing about Henry’s lectures, describes him as an “extremely effective teacher who had warm personal relationships with his students” and who clearly made an “indelible impression” on their minds with his remarkably innovative
The open question, of course, is whether Melville would have seen—or comprehended—Henry’s early “telegraph.” (It seems safe to suggest that would have been quite memorable).

Accounts from Princeton the very next year indicate that the telegraph—not surprisingly, and rightly so—served as the crowning example of Henry’s dramatic showmanship. One student from Henry’s first year at Princeton offers, for example: “I most distinctly recall, for I was strongly impressed by the remark, how… he said with some emphasis, ‘there, young gentleman, you have in what you have just seen the germ of a telegraph, which, by an easy system of signs, will carry information around the globe.’”

The details about Henry’s invention are both contested and unclear. But several reports indicate that he “consistently demonstrated this arrangement to his classes at Albany” and that his model had miles of wire that was “strung in successive loops” around the regularly-used assembly hall on the second floor. For demonstrations Henry even extended the wire into the basement laboratory to “dramatize” it further. So while Henry only reports lecturing on the cutting-edge topic to his senior classes in his biography, the invention seems to have been at least materially accessible.

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106 SIA RU 7001, Box 27, Folder 18.
107 Hochfelder, “Joseph Henry: Inventor of the Telegraph?” Moyer, Joseph Henry: The Rise of an American Scientist, 69. There was much debate, years later, about the location of these demonstrations. But Henry’s assistant, William Carpenter, explained that the wire extended from the basement to an upstairs floor to “dramatize” it further. SIA RU 7001, Box 43, Folder 18.
One newspaper clipping from Henry’s memorial even offers a memorable (but potentially mythical) account: Henry announced to the Academy’s students that he had just “had a wonderful dream.” He wanted them to witness it becoming “actuality.” So he invited them down to the laboratory, where he assembled the original “telegraph machine.” More precisely—as we learn from a prominent lawsuit—Henry constructed the mechanism. Then Morse found a way to make it turn a profit.

This image of Henry’s prototype of the telegraph can be found in the Annual Report of the Board of Regents of the Smithsonian Institution from 1857, which offers Henry’s response to Samuel Morse’s failed attempt to gain a patent. The magnet was activated by a signal sent through the wire. Dibner Library, Smithsonian Institution.

109 Mr. Hoffman, the long-time Academy janitor, and William Carpenter, his former assistant, both vividly remembered, after Henry’s death, that “one morning, after the prayers in Bullions' room,” Henry “announced to all the students that he had had a wonderful dream.” He wanted the students to “see him make it an actuality.” So he invited them downstairs to the basement laboratory where he had strung his wires, then showed them the way he’d dreamed a bell could “announce his breaking of a circuit.” The author of the anonymous newspaper clipping actually concludes: “no doubt that body of young fellows never realized the full meaning of his demonstration.” SIA RU 7001, Box 43, Folder 18.

110 David Hochfelder, “Joseph Henry: Inventor of the Telegraph?”
For sorting out what Melville would have understood, of course, the legacy of Henry’s transformative invention may be more appropriate. And here we can turn to the program for the Academy’s “Semi-centennial Celebration” in 1863, which offers a window into the school’s representation of this defining moment:

The older students of the Academy in the years 1830, 1831, and 1832, and others who witnessed his experiments, which at that time excited so much interest in this city, will remember the long coils of wire which ran, circuit upon circuit, for more than a mile in length around one of the upper rooms in the Academy, for the purpose of illustrating the fact, that a galvanic current could be transmitted through its whole length, so as to excite a magnet at the farther end of the line, and then move a steel bar which struck a bell. This, in a scientific point of view, was the demonstration and accomplishment of all that was required for the magnetic telegraph. The science of the telegraph was here complete.\footnote{This phrasing, “the science of the telegraph” was careful and important, since obviously Samuel Morse is credited with the invention. But as the Academy’s pamphlet continued, Henry’s machine simply needed Morse to “make it available for practical use. It was not for the man of science… to apply his discoveries to the practical purposes of life.” Morse even sued Henry, who was consistently more interested in “science” than in commercial profit or recognition. For details on Henry’s role in the invention—and related legal entanglements—see Smithsonian Institution, \textit{Extracts from the Proceedings of the Board of Regents of the Smithsonian Institution, in Relation to the Electro-magnetic Telegraph} (Smithsonian Institution, 1861) along with letters in SIA RU 7001, Box 27, Folder 18.}

In short: even if Melville didn’t see the telegraph himself, it would have been a significant part of his intellectual heritage—as it was for both the Academy and for the city. In the words of the Anniversary program: “let us not forget, that the click of the telegraph, which is heard from every joint of those mystic wires which now link together every city, and village, and post, and comp, and station, all over this continent, is but the echo of that little bell which first sounded in that upper room of the Academy.”\footnote{In his introduction to the program, Henry’s friend Orlando Meads also offers confirmation: “I was an eye-witness to those experiments.” Albany Academy, \textit{Celebration of the Semi-centennial Anniversary of the Albany Academy: Albany, June 23, 1863} (Albany: J. Munsell, 1863), 5, 48.}
Henry’s bell was also clearly part of Melville’s family story. “The historic bell which Henry used in demonstrating his invention of the electromagnetic telegraph” was taped into the “Albany Book” of photos kept by Peter’s daughter, Catherine Gansevoort-Lansing, who was one of Melville’s most faithful supporters.

The bell had been on display at the school’s Centennial Celebration of Henry’s birth, and its picture, program, and related newspaper clippings were the only items in the family’s albums that weren’t photographs.


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This “telegraph” was by no means the only major scientific work at the heart of the Academy’s culture while Melville was enrolled. As I’ve already mentioned, from 1825 to 1850 Albany was actually the national center of work on meteorology. Its program began when Simeon De Witt proposed that each Academy chartered by the State be furnished with a thermometer and a rain gauge. These were serious scientific devices, designed and supplied by the Board (Peter Gansevoort included), which prescribed rules for making, recording, and submitting observations. And De Witt’s plan was adopted, along with a stipulation that an “exact register of observations” was required in order to receive funding from the state. So for over thirty years the New York Academies provided detailed accounts of temperature; precipitation; wind direction; clouds; and “every meteorological phenomenon that came under notice,” from storms to the first annual appearance of flowers and frosts.

113 Fleming, Meteorology in America, xxii, 9; Reingold, Papers of Joseph Henry, 1: xxvi, 106.
114 Thermometers were made by Kendall of New Lebanon, and rain-gages were supposedly invented by DeWitt—though we learn from Henry’s papers that he had a hand in their design, as I will discuss. (DeWitt is given credit but simply wrote in the Regents; Instructions that a new gage had been adopted). Franklin Hough and David Murray, Historical and Statistical Record of the University of the State of New York: During the Century from 1784 to 1884 (Albany: Weed, Parsons & Company, 1885), 767; SIA RU 7001, Box 28, Folder 1; New York Board of Regents, Instructions from the Regents, 29.
115 It’s also worth noting that Peter Gansevoort had a hand in passing this law as a member of the Board of Regents. Franklin Hough and David Murray, Historical and Statistical Record of the University of the State of New York, 766-767.
This “New York Academy System” offered unprecedented coverage. In fact, it was the very first large-scale weather system: then a term used to describe collections of reporters, not large storms. Forms were sent to Albany from across New York, and Beck collected and reported the results, with help from Joseph Henry, who was a central part of this research until 1832.116 In Henry’s words: “in connection with Dr. T.R. Beck I have the principal direction of the meteorological observations made by the different academies of the state of New York to the Regents of the University. In this work I am considerably interested and have hopes at some future time to deduce many facts from it of importance to the science of Meteorology.”117

![Image]

Returns of the Meteorological Observations, compiled by Beck and Henry.

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116 Beck is described as engaging in “painstaking labors” to prepare the returns for publication in annual reports for the Regents. “In the earlier years,” the *Historical and Statistical Record* confirms, “he was assisted by Joseph Henry.” Hough and Murray, *Historical and Statistical Record*, 768. Also see T.R. Beck and Joseph Henry, *An Abstract of the Returns of Meteorological Observations Made to the Regents of the University, 1825* (Albany: 1828).

117 SI Archives RU 7001, Box 7, Folder 9.
We begin to understand the strengths and sophistication of The New York Academy System when we realize it was the largest system in the world until 1848—when Henry simply expanded its model to a national scale for the Smithsonian’s remarkably similar “big data” project. The system was precise, it was technical, and it was remarkably well organized. For example, in Gideon Hawley’s Instructions from the Regents we find a section on “Meteorological Returns” that reprimands negligent Principals: “the meteorological reports from some academies are so deficient, notwithstanding all the instructions which have been heretofore given on the subject, that the Secretary finds it necessary to be more particular in his remarks than he has heretofore been.” Then he explains that the form for observations each month “must be strictly and literally followed in every part and particular.” Errors like daring to use “vulgar, instead of decimal fractions,” would absolutely not be “tolerated.” And here Hawley reminds readers that whether

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118 Henry dedicated thirty percent of the research budget of the Smithsonian Institute to an even more extensive “system of extended meteorological observations, for solving the problem of American storms” in 1848, which is why the Academy reporting stopped in 1849. Fleming, Meteorology in America, 76. The New York Board of Regents also directly viewed the Smithsonian Institution’s famous program as an expansion of the Academy System. Hough and Murray, Historical and Statistical Record, 771.

119 University of the State of New York Board of Regents, Instructions from the Regents of the University, to the Several Academies Subject to Their Visitation, Prescribing the Requisites and Forms of Academic Reports, 1834, 12. We find seven pages of instructions that aimed to improve the Regents’ measurements. For example, Henry writes that in freezing weather each rain-gage had to be moved indoors and replaced by a tin vessel. Its opening must be “exactly equal,” and it must be placed somewhere free from blowing drift snow. To measure its contents it should be melted over a fire—but it must also be covered to prevent evaporation. And these lists continue. New York Board of Regents, Instructions from the Regents, 27-33.
policies are “willfully disregarded or carelessly overlooked” they will lose “public money.”

Even so, these directions don’t begin to give a full sense of the importance of meteorology at the Academy when Melville was enrolled. Henry’s papers include descriptions and pictures of meteorological devices at the Academy, like the rain gauge shown below.

![Rain Gauge](image)

Rain Gage used at the Albany Academy, drawn by Joseph Henry for Samuel DeWitt. Smithsonian Institution Archives, RU 7001, Box 28, Folder 1.

In fact this “weather gauge” took on some degree of local fame when it was stolen from Principal Beck. The theft was more serious than it might sound, since this was government-issue equipment. And years later Henry sent Beck a playful anonymous note that offered answers:

120 New York Board of Regents, Instructions from the Regents, 12, 30.

121 These devices were so carefully regulated that when Academies were required to send for updated equipment, and “the person sent must be one of the trustees or officers of the academy.” New York Board of Regents, Instructions from the Regents, 30, 33.

122 SIA RU 7001, Box 7, Folder 1. We can’t be certain this is Henry, but this document is currently among his papers in the Smithsonian Institution Archives. Not many former students went on to have professional relationships with Beck. And this “WXY Post Office” appears to be a reference to “WXY” as the Call Signal for the signal corps office in Washington DC. (Henry would have known these. In the 1860s he was working on an “extended bibliography” on meteorology with the Chief of the Signal Service of the War Department). Hough and Murray, Historical and Statistical Record, 774.
“You may recollect the affair of your weather gauge,” Henry opened, before offering that four of Melville’s Fourth Department classmates—including Patrick Smyth—were the culprits. They “had a small gauge” and wanted to copy an “accurate scale.” Unfortunately in the midst of their project, Beck arrived—and “being terrified” they sprinted off with the entire “apparatus.”123 Their “terror” supports the Academy’s reputation as oppressive and draconian at the same time, it seems, that the students went running to Henry. (His occasion for sending the note was that they were all finally safely “out of the Academy.”) But more importantly, here we learn that Melville’s classmates had their own meteorological devices, which they used for recreation. They knew how to work them. And they wanted results.

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In general Henry’s lectures dealt with his current and cutting-edge work. Most anecdotes point in that direction, and we know that he was revising his chemistry lectures rather intensely, even writing to the editor of The American Journal of Science, Benjamin Silliman, for teaching advice while he was still in Albany.124 Upon arriving at Princeton the very next year we find that his process for shaping a new course in physics “turned out to be more than a casual undertaking.” Henry began to notice new problems and gaps, and for the next two years his research agenda was shaped accordingly. In an essay on Henry as one of the first scholars truly committed to the “teacher-scholar idea,” Charles Weiner, who quite literally wrote the book on Henry’s teaching, explains that Henry was often atypically focused on drawing students “into the process of discovery.”125 He had them serve as assistants for experiments and demonstrations,

123 SIA RU 7001, Box 7, Folder 11.
124 SI Archives RU 7001, Box 7, Folder 9.
125 In his powerful account of Henry’s classroom methods, Weiner offers: “Reading through the lecture notes, one gets the impression that Henry was not merely imparting up-to-date knowledge to his students, but very often he was ‘thinking out loud’ in an attempt to relate his research and that of his contemporaries into a meaningful whole. The lecture demonstrations were not just exhibitions of established principles; they were frequently actual experiments that Henry was performing as part of his continuing research and electricity and magnetism… He communicated existing knowledge to his students through his lectures, and acquainted them with methods of approach and unsolved scientific problems by involving them in the process of discovery.” “Joseph Henry and the Relations Between Teaching and Research,” 1096-1100.
operating complicated batteries or “pulling mightily” on rope to try to separate two magnets.\textsuperscript{126}

And it was said that no graduate left “without a profound sense of the great benefit derived from the instructions of the professor and a warm attachment to the man.”\textsuperscript{127}

Despite his trenchant support of memorization drills, Henry was a remarkably enlightened teacher. This began, as I’ve mentioned, on the “Rensselaer Flotilla”: an “experimental traveling summer school” that worked to publicize the school’s new methods alongside the Erie Canal. The innovative new school’s goals were to “extend the scope of the Rensselaer School and to publicize its teaching method of student participation and demonstration.” Students did things like giving lectures on their findings to townspeople at different stops.\textsuperscript{128} And this integration continued throughout Henry’s career. Weiner repeatedly reminds us that Henry’s “most productive research was done during his two decades as a teacher,” despite the fact that he was “unusually conscientious” and frequently “subordinated his research to do a better job of teaching, because he felt an almost compulsive obligation to his students,” who had “warm personal relationships” with him.\textsuperscript{129}

\textsuperscript{126} During his first years at the Academy Henry’s innovation was often due to circumstance, like working creatively with laboratory that needed more equipment. But Henry continued to pair teaching and research because he wanted to save time. Weiner, “Joseph Henry’s Lectures,” 44. In introductory remarks to his early classes at the Academy, for example, Henry expressed to senior students: “Had we a good collection of instruments such as is to be found at West Point, comprising a separate article for each experiment, the labor of preparation and the chance of failure would be much diminished.” But Henry was, essentially, going off-book and focusing on imparting knowledge of “general principles.” His thinking was almost experimental: “Should I advance anything any member may not think correct I will thank him to correct me. I also am a learner and I will be pleased if the class will propose to me any question which may require a solution connected with the course. I cannot promise to answer everything… but will endeavor…to gain that knowledge of which I may be ignorant.” Albany Academy Trustees, \textit{Notes and General Records}.

\textsuperscript{127} His style was pure and simple,’ one student recalled, and ‘his manner of lecturing easy, graceful, and impressive.’… that ‘even the dullest members of the class had knowledge forced into them almost without effort on their part, and the brightest were aroused to the utmost enthusiasm.’ Swartz, “Joseph Henry: America’s premier physics teacher,” 348-357; SIA RU 7001, Box 30, Folder 6.


\textsuperscript{129} Weiner, “Joseph Henry’s Lectures,” 5, 43.
The key to this was demonstration. At a time when “most schools had no reference books, no critical editions of literary works, no maps, charts, or globes, not even pictures on the walls,” Henry stressed the importance of visual props. The Academy, we learn in its Statutes, used “Celestial, & Terrestrial Globes, Wilkinson’s Atlas classical, and Arrowsmith’s large maps.”

And Henry regularly went out of his way to use “common materials” as visual aids for creative demonstrations. Balls represented “atoms” and were “connected by springs, to represent attraction and repulsion.” And sponges dipped into glasses of water brought “porosity and absorption” to life. But the highlight of Henry’s emphasis on visual props required special equipment: the blackboard. This may be incredibly difficult to believe, but at the moment Henry transformed the Fourth Department’s arithmetic curriculum, blackboards were “new media” that hadn’t reached most classrooms. Henry used them for “demonstrations” in chemistry and math. And he also used blackboards to capture students’ attention, drawing comics related to class each day. “Steam, for example, was introduced with a figure in tails riding a cylinder of gas, with a cloud coming out of the rear of the ‘machine,’ quite graphically demonstrating propulsion”.

130 Swartz helpfully suggests that “demonstrations were the core of his teaching.” Swartz, “Joseph Henry: America’s premier physics teacher,” 348, 350; Albany Academy, Statutes of the Albany Academy 1829, 13.

Henry’s experiments even extended beyond the Academy’s walls. We learn that students—including Henry James Senior—would meet Henry in the Academy Park. There he would offer “amusements and instruction” in memorable arenas like “balloon-flying.” Here “science” took on some of its more exciting forms, as “air-ships” that were saturated in turpentine caught on fire.132 Melville appears to have learned from Henry in the Park as well. For example, in Moby-Dick’s “The Needle,” Ahab discovers that his compass is off. So he declares to his men: “the thunder turned old Ahab's needles; but out of this bit of steel Ahab can make one of his own, that will point as true as any.” They “awaited whatever magic might follow.” But instead of magic, Ahab offered science: repeatedly smiting the end of an iron rod, then using it to change a needle’s charge.133 Henry, it turns out, used to do the same thing. He used metal to change the polarity of needles, even finding that “soft iron” worked far better than magnets—a detail salient enough to suggest a connection between the Academy’s most famous scholars.134 And he conducted these experiments throughout 1830 and 1831—both in the Academy and in the Park outside.135

Melville and Henry were invited to share the stage together as honored “dignitaries” for the fiftieth anniversary of the Academy in 1863. In fact, when we turn to the official program for the celebration, learn that “Herman Melville, whose reputation as an author has honored the

132 Alfred Habegger, The Father: A Life of Henry James, Senior, 70.
133 Herman Melville, Moby-Dick, 340.
134 Melville’s account of Ahab’s scientific production seems surprisingly reminiscent of Henry’s dramatic demonstrations: “going through some small strange motions with it—whether indispensable to the magnetizing of the steel, or merely intended to augment the awe of the crew, is uncertain.” After some “quivering and vibrating” the needle “settled to its place, when Ahab, who had been intently watching for this result,” dramatically pointed and “exclaimed,—'Look ye, for yourselves, if Ahab be not the lord of the level loadstone!’” Herman Melville, Moby-Dick, 340. This is by no means the only link that could be drawn between Henry and Ahab. And I’ll certainly share more as this project unfolds. But I’d like to conclude with one especially intriguing anecdote. Patrick Smyth, Melville’s classmate in the Fourth Department, also remembered a fascinating fact about Henry’s appearance: in 1830 Henry “met with a serious accident in the laboratory,” and in its aftermath, “he bore a cicatrized sore upon his face.” SI Archives RU 7001, Box 27, Folder 18. It’s tempting to think of Henry next to Ahab, with his “slender rod-like mark, lividly whitish” as if made by “lightning”—both passionately and dramatically dedicated to their charts, dynamic in their demonstrations. Herman Melville, Moby-Dick, 108.
Academy, world-wide,” was “warmly welcomed.”136 Henry was also listed in the program, but unfortunately “official business” kept him in Washington.”137 Even so, it seems as if Melville and Henry did, in fact, cross paths for this event. They were members of a small committee that met for a planning meeting in April. It was called by Peter Gansevoort, then President of the Board of Trustees. And this encounter is an especially fitting conclusion. When Peter sent Melville his official invitation, his letter tellingly requests: “permit me to indulge the hope, that you will show your gratitude to the Academy and your appreciation of the services it has rendered the cause of Science by uniting in the celebration & favoring us with an expression of your feeling.”138

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136 Albany Academy, *Celebration of the Semi-Centennial Anniversary*, 11.


138 Albany Academy, *Celebration of the Semi-Centennial Anniversary*, 4, 48, my italics. Interestingly enough, Melville’s name appears on the only page that Henry annotated when he read through the Semi-Centennial Celebration program. Henry marks the suggestion that “with his wires and silk thread, winding miles of insulated copper,” he “patiently toiled his way to the demonstration of the galvanic battery, and years before the invention of the telegraph, proclaimed to America and to Europe, the means of communication by the electric field.” In the very next paragraph, we read names of “scholars who gave credit to their tutors, by subsequently rising to distinction.” Melville, of course, makes the list.
After the Albany Academy

Melville was not able to formally study with Henry after 1831, but there were ample opportunities for interaction before Henry left for Princeton. First, in response to a “rising demand for better public schools,” the Regents proposed that faculty give “brief courses of lectures” to the public. These lectures were seen as part of the tradition of popular enlightenment related to the Lyceum. They were very well attended. And they included the “introductory chemistry lecture” that was delivered in 1832. Melville’s brother Gansevoort may have even been formally enrolled in Henry’s lectures—or in his mercantile program. (Gansevoort was a student at the Academy until March 1832, when he took over his father’s cap and fur business. And in addition to his experiments in the Academy Park, Henry was widely accessible as the Librarian for both the Institute and the Academy, which both Herman and Gansevoort used. (Both libraries were, conveniently, housed in the Academy Building).


140 Titus, “Herman Melville at the Albany Academy,” 7, 9. The family’s finances were “chaotic” at best, so while Gansevoort began in the more expensive college preparatory General Course (and excelled), transitioning to the mercantile program certainly would have made sense. Parker, Herman Melville: A Biography, 1:51.

141 Reingold, “The New York State Roots,” 139; Gilman, Melville’s Early Life and Redburn, 91. Information about the Academy’s library could serve as a helpful source for understanding Melville’s early reading. As librarian Henry produced a full catalogue of its 682 volumes. Reingold, The Papers of Joseph Henry, 1:182, 220. For a full listing, see the Albany Academy Trustees’ Notes and General Records. We can’t be sure of the degree to which Melville used these collections, but Parker suggests that ”Gansevoort devoured books in the years after his father’s death” and “determined, more than any other person, what books were around the house or in the store for Herman Melville to pick up.” We know from sources like his reading journal that Gansevoort drew books from a number of locations: the Athenaeum, the Albany Library, the Young Men's Association for Mutual Improvement, John Cook’s reading room, along with both libraries at the Albany Academy. Parker, Herman Melville: A Biography, 1:91; Gilman, Melville’s Early Life and Redburn, 72, 315. The New York State Library was also “public during the sessions of the Legislature” and “owned an excellent collection in mathematics, natural history, and the physical sciences,” including “chemistry, geology, botany, zoology, and medicine.” Henry was involved in its acquisitions process as well. Reingold, The Papers of Joseph Henry, 1:183.
Melville certainly committed himself to the intellectual life of the city at a young age. Robertson-Lorant memorably speculates that Melville “began to resent being forced to leave school just when he was beginning to enjoy studying,” and his lost opportunity “turned him into a voracious reader and an indefatigable autodidact.” But whatever his reasons, Melville certainly read avidly. Then he joined the Young Men’s Association when he was still fifteen. (This was thoroughly precocious: members were officially required to be sixteen.) Melville was young, of course, but he’d obviously been through quite a bit and was holding down a job at the New York State Bank, even being sent out of town on business. He was also an active member of Albany’s Philo Logos Society. In short, it seems entirely possible that Melville’s combination of intellectual engagement, personal connections, and social maturity made it possible for him to continue to connect with Henry—or, at least, to cross paths with him—or to follow his work.

Interestingly enough, Joseph Henry also would have had reasons to continue to engage, starting with his own interest and investment in students who couldn’t afford to enroll. Henry was “a poor boy, said to be ‘orphaned early in life.’” (Henry’s father died; but, in fact, his mother lived in Albany for years). And after a very basic elementary education he was apprenticed, at the age of twelve, to a silversmith and watchmaker. Originally his passion was for the theater, and he became a “‘bright particular star’” in Albany, with offers for “a permanent engagement with a liberal salary.” But T.R. Beck made a “counter-offer” for him to enroll in the Albany Academy, and luckily he accepted. The reason, apparently, was George Gregory’s Lectures on Experimental Philosophy, Astronomy, and Chemistry: an accidental discovery and the first book he ever “read

142 Robertson-Lorant, Melville: A Biography, 55.
143 Jay Leyda, The Melville Log, 64; Gilman, Melville’s Early Life and Redburn, 73.
144 Stories related to Melville’s travel vary, but we know that—within a year of his departure from the Academy, or when he was thirteen—Gansevoort ran into Herman out drinking at a “bar-room” and reported, in his journal, that at first “he first could not imagine the reason of his being there, but on reflection saw that the bank must have sent them over,” which turned out to be true. Gilman helpfully observes that Melville “must have matured considerably if the bank was willing to entrust him with its affairs outside the city.” Jay Leyda, The Melville Log, 64; Gilman, Melville’s Early Life and Redburn, 64.
145 Melville was even elected President in 1838. Parker, Herman Melville: A Biography, 1:122.
with attention.” He explained: it opened to me a new world of thought and enjoyment, invested things before almost unnoticed with the highest interest, fixed my mind on the study of nature, and caused me to resolve at the time of reading it that I would immediately commence to devote my life to the acquisition of knowledge.” Henry did, in fact, immediately enter “upon a course of avid reading for self-improvement.” ¹⁴⁶ And at risk of a cliché, in the narrative of Henry as “self-made man,” one especially telling item in his personal papers is a list that is almost identical to Benjamin Franklin’s thirteen virtues for “arriving at moral perfection”—though Henry’s seem to be far more sincere.¹⁴⁷

Like Melville—along with his famous line, “a whale-ship was my Yale College and my Harvard” too—Henry “represented himself as ‘principally self-educated.’” And this is something that affected him. In his first exchange with Princeton about a possible position, for example, Henry felt the need to ask: “Are you aware of the fact that I am not a graduate of any College and I am principally self-educated?”¹⁴⁸ (His pedigree clearly weighed on his mind). And Henry may have wanted to pay forward his life-changing help from Beck. Nathan Reingold, the founding editor of *The Papers of Joseph Henry*, concludes a piece on “The New York State Roots” of Henry’s career with an anecdote of Henry helping a junior scholar along in a similar way, along with the speculation that “Henry’s real duty—a self-imposed one—was to so order his immediate environment that others could also enter the world of sweetness and light.”¹⁴⁹

Henry consistently supported the dissemination of knowledge and the improvement of common schools, or free public schools. He was even appointed, by the New York State Lyceum, to give a lecture on adding the sciences to their curriculum. In his reply, Henry offered, very earnestly, that the “diffusion” of “useful knowledge” among citizens “is the principal, if not the

¹⁴⁷ Henry’s copy is actually identical until he omits the infamous: “13. Humility. Imitate Jesus and Socrates.” SI Archives RU 7001, Box 28, Folder 5.
¹⁴⁹ Reingold, “The New York State Roots,” 144.
only means of promoting individual happiness as well as material prosperity.” In fact, he continues, “I know of no better method of accomplishing it than by raising the character of our common schools.”

Henry made similar claims very publically in an address that came to be known as his “Philosophy of Education”: “common school or elementary education is the basis on which the superstructure of the plan of true progress should be established,” he explained, so “endless provision ought to be made for all grades.” In fact, at a time when only half the city’s children received any schooling at all, Henry insisted that every individual should have “as much mental culture as he is capable of perceiving or desirous of acquiring.” This democratic spirit is what led Henry to the Smithsonian, amidst other more attractive offers. He was genuinely drawn to the idea of an institution that focused on the “diffusion of knowledge.”

It’s impossible to overestimate what Weiner concisely describes as Henry’s “informal training through public lectures, books, activities of scientific societies, and contact with established men of science.” And Melville benefitted from the same networks, which Henry seems to have expanded: lectures, library resources, and public gatherings in the Academy Park, which Melville would have passed on the walk home from his new job.

Melville’s engagement with mathematics and science clearly continued after his formal “dismissal” from the Academy, with or without Henry. He went to work at the New York State Bank, where he filed, copied, and ran errands at a remarkably powerful institution: the state bank in the so-called “Empire State.” There he received a different education in finance, “surrounded by money in multiple forms,” specie to banknotes, mortgages to bonds. Melville left to work

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151 Henry, “The Philosophy of Education,” 79; Reingold, The Papers of Joseph Henry, 1:240-242. It’s also worth noting that Henry attempted to actually practice this philosophy. He served on the board of the Albany Lancaster School, which gave out thousands of scholarships. His plan for the Smithsonian focused on “publications and public lectures that would make the results of research available.” And Henry consistently emphasized the need for universities to “advance knowledge as well as to diffuse it”—notably a chemical model. Weiner, “Joseph Henry and the Relations Between Teaching and Research,” 1100.

152 For Melville’s work at the New York State Bank, which his grandfather had founded and where his uncle was a trustee, see Gilman, Melville’s Early Life and Redburn, 61-62; Parker, Herman Melville: A
for Gansevoort in 1834, when a fire burned down his warehouse and he had to lay off his employees. And at that point he was certainly qualified for basic accounting and bookkeeping.\textsuperscript{153}

By March 1835 the family’s fortunes were improving. Gansevoort’s business had recovered, part of Maria’s mother’s estate was sold, and Melville was enrolled at Albany Classical School. He could have gone elsewhere. In fact, the next Fall Allan returned to the Academy in the most expensive Second or Classics Department.\textsuperscript{154} So it’s well worth considering Melville’s reasons for selecting Albany Classical. The standard narrative is that Melville was “not distinguished in mathematics,” but he developed a “love of English composition” that was identified by his teacher, Charles E. West.\textsuperscript{155} But the source of this oft-quoted comment is one line from a short biographical piece from 1891. And I am wary of placing too much weight on a brief recollection of something half a century into West’s past, years after Melville had become a famous author.\textsuperscript{156} Instead I would like to offer an alternative version: Albany Classical “furnished every facility to prepare young men for business careers.” And Melville—who left a job at the bank, on the way to becoming a teacher—enrolled to study, specifically, with Charles West, who was—like Henry—“a young chemistry and natural history scholar.”\textsuperscript{157} (In fact West and Henry were friends).\textsuperscript{158}

\textit{Biography}, 1:70, 95; Robertson-Lorant, \textit{Melville: A Biography}, 55. Melville earned $150 a year. And Gilman helpfully notes that the position “was probably suitable to his talents,” and “he was far from being the only boy of his background who had to exchange school for business.” Many classmates left the Academy at 13 or 14 to become apprentices or clerks. The position also had advantages like a business trip on the new Mohawk and Hudson railroad. While there’s no way to know how to interpret this, at some point Melville “scrawled” the word “‘Bank’” “inside the back cover of his Murray’s \textit{Reader}.”

\textsuperscript{153} \textit{Herman Melville: A Biography}, 1:95; Robertson-Lorant, \textit{Melville: A Biography}, 59.

\textsuperscript{154} \textit{Herman Melville: A Biography}, 1:98-99.

\textsuperscript{155} For example, Laurie Robertson-Lorant offers: “Ironically, while he was preparing for a practical career, Herman developed a ‘love of English Composition.’” Robertson-Lorant, \textit{Melville: A Biography}, 42. 60. And Gilman simply reproduces Smith’s account. Gilman, \textit{Melville’s Early Life and Redburn}, 72.

\textsuperscript{156} J. E. A Smith, \textit{Biographical Sketch of Herman Melville} (Pittsfield: The Evening Journal, 1891), 6. It’s worth noting that, as Gilman points out, West even calls the school the “Albany Classical Institute,” when that version didn’t come into existence until 1842. Gilman, \textit{Melville’s Early Life and Redburn}, 314.

\textsuperscript{157} Gilman, \textit{Melville’s Early Life and Redburn}, 71. We also know that West was a collector of “microscopes and other optical instruments and microscopic objects.” George Derby and James Terry White, \textit{The National Cyclopedia of American Biography} (J. T. White, 1898), pg. 236. And at the Oneida Institute he became the Chair of Chemistry and Natural History. George Derby and James Terry White, \textit{The National Cyclopedia of American Biography} (J. T. White, 1898), pg. 236.
West was educated near Melville’s family home in Pittsfield, and he taught school there until he left for Union College. When he graduated in 1832—and moved to Albany to study law—he met other Union graduates, including Beck and Hawley, took up “private teaching” on the side, and “in a short time had collected a class of fifty boys, for whose better instruction he founded the Albany Classical School.” West stayed with the school until 1835, though as it expanded he turned over the administrative work and was primarily a “teacher in the higher department.”

Our knowledge of Melville’s enrollment at Albany Classical is quite sparse. All Parker offers, for example, is that this was a time when Melville “had access to a little money for educational purposes,” including a $1.50 initiation fee and dues to the Albany Young Men’s

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158 SI Archives RU 7001, Box 46, Folder 1.

159 West taught in the North Woods District, just past Lake Onota—across town from Thomas Melville’s farm and Melville’s future home at Arrowhead. Even so, when West arrived in Albany Melville was already quite fond of the area. His father took him to Pittsfield for the first time just after Melville won his book award, and years later Melville remembered it quite fondly. He saw his Uncle Thomas again that year as his father was dying, and his family quickly fled to Thomas’ farm in Pittsfield during the Chlorea outbreak in 1832. Robertson-Lorant, *Melville: A Biography*, 46, 48, 56. Gilman also strongly suggests that Melville was in Pittsfield from Spring 1834 until he returned to work for Gansevoort—and enrolled in Albany Classical—in early 1835. Gilman, *Melville’s Early Life and Redburn*, 65, 70, 312.


162 I hope to learn more about the Albany Classical School’s curriculum—and West’s work there—from *Albany Argus* articles and from advertisements in Albany. I have confirmed that West’s real love was clearly chemistry: he was a collector of “microscopes and other optical instruments and microscopic objects.” Derby and White, *The National Cyclopedia of American Biography*, 236. And the relationship between the Academy and Albany Classical was strong enough that in a report to the State Legislature recommending a textbook that was allegedly “from the Albany Academy,” we find signatures from Beck, Bullions and Samuel Center, the Principal of the Albany Classical School. This advertisement is found in Solomon Barrett and Byron Simeon Barrett, *The Principles of Grammar: Being a Compendious Treatise on the Languages, English, Latin, Greek, German, Spanish and French* (Rand, 1859), but the recommendation in the press must be significantly older, since the Albany Classical School was incorporated by the Legislature and renamed the Albany Pearl Street Academy in 1836, and Peter Bullions lost his job at the Academy in 1848. Here it’s also worth noting that when Melville attended the school was about to become an Academy—though it was never placed under the Regents’ control. Titus, “Herman Melville at the Albany Academy,” 8. So there is clearly more that can be said, by way of both exploring the school’s curriculum and resisting any sense that Melville settled (or was unwilling or unable to return to the Academy, which he did in September 1836).
association. And Melville was “enrolled at the Albany Classical School (apparently in the Spring) while still working still at his brother’s store.”

So for a number of reasons—from their Pittsfield connection to West’s interest in Chemistry to the way the school slowly built up from more affordable “private teaching” by someone attempting to build a whole class—it’s possible that Melville’s education wasn’t actually terminated between 1832 and 1835. In fact, the only thing we know with any certainty is that West and Melville seem to have left Albany Classical at the same time. And imagining this longer period of study would certainly begin to help account for the otherwise inexplicable fact that West simply doesn’t write like someone who only taught Melville for a few months back in 1835.

There are obvious reasons to take credit as an inspirational figure to Melville, of course. But West, it turns out, was at least moderately famous in his own right. He went on to a storied career as a professor and an activist, leaving Albany for the Oneida Institute: a trade school run by abolitionists that educated African Americans. And he left quickly, amidst political scandal, only to enter new political waters: West took over the Rutgers Female Institute in New York. In fact, he led Rutgers to its incorporation into the state university system—establishing one of the the very first colleges for women in 1838. West’s ideas, which were “then strikingly novel,” included a refusal to limit the “educational facilities offered to women in every branch of

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163 Parker, Herman Melville: A Biography, 1:97-98. Melville’s enrollment at Albany Classical is also discussed very briefly in earlier work including but not limited to Smith, Biographical Sketch of Herman Melville, 6; Arthur Steadman’s “Marquesan Melville,” New York World (October 11, 1891): 26; and Gilman, Melville’s Early Life and Redburn, 65, 70, 312.

164 Titus explains that West left Albany Classical in 1835, and he was hired by Oneida in 1836. Meanwhile Melville was back at the Academy in September 1836—the same month Gansevoort, after surviving a fire, was ready to expand his business and to hire 22 employees (“Twenty Hat Trimmers” and two apprentices). Titus, “Herman Melville at the Albany Academy,” 8; Robertson-Lrant, Melville: A Biography, 61.

165 The original source offers that: “in 1835 Professor Charles E. West, a Pittsfield man, whose after career as a leader in the education of young women is familiar to the readers of the Journal as well as to all students of educational history, was president of the Albany classical institute for boys, and Herman Melville became one of his pupils. Professor West now remembers him as a favorite pupil, not distinguished in mathematics, but very much so in the writing of ‘themes’ or ‘compositions,’ and fond of doing it, while the great majority of pupils dreaded it as a task, and would shirk it if they could.” Smith, Biographical Sketch of Herman Melville, 6.
knowledge, so that their possible achievements may not be bounded by any limitations but those of their own powers.” So West offered women education in chemistry, astronomy, and higher mathematics, despite complaints that “studies were of too elevated and difficult a range.” He continued to develop several other schools for women, and when he retired at the age of eighty, more than 15,000 students had been in his courses. SUNY even “created a doctorate in pedagogy for the sole purpose of conferring it upon Dr. West.”

Despite these other involvements—and a massive number of other students—West had a copy of Typee on his shelf. (In fact, Melville’s book was item #2582 in “an unusually large and well-selected private library” that was important enough to have a published catalog.) He also considered the text’s curious relationship to “fact” in some detail, in ways that suggested he had discussed it with the author himself. And J.E.A. Smith, Melville’s first biographer, even believes that West boarded with Peter Gansevoort: potentially just after his move to Albany, which was during the cholera outbreak that had Melville also staying in his Uncle’s home. Whether this connection is accurate or not, West’s familiarity seems to have a number of sources. And it seems clear that he knew Melville in some capacity for much longer than one term.

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166 Derby and White, American Biography, 235-236; Charles E. West on Retiring from the Office of Principal of the Rutgers Female Institute (John A. Gray, 1851), 3-5.

167 Derby and White, American Biography, 236; Catalogue of the Library of Professor Charles E. West, M.D., L.L.D., the Well-known Scholar, Antiquary and Instructor (Bangs & Company, 1889), 196.

168 West recalled, years later, that Melville “was so strict in truthfulness” that when he “read 'Typee' for the first time he was shocked that [Melville] should send out 'such a pack of lies,' and was greatly relieved when an 'ancient mariner' who was familiar with the Typee valley, assured him that they were not lies but veritable facts.” Smith, Biographical Sketch of Herman Melville, 6.

169 West explains: “Mr. Melville's uncle, Hon. Peter Gansevoort, was one of the trustees of the institute, and we have reason to believe that he made his home with him.” Smith, Biographical Sketch of Herman Melville, 6. For discussion of Melville living with Peter see Parker, Herman Melville: A Biography, 1: 70.

170 See note above for the full passage from Smith, Biographical Sketch of Herman Melville, 6.
Herman returned to the Academy in September 1836. Unfortunately he withdrew in March, in the wake of the Panic of 1837, when Gansevoort went bankrupt.\textsuperscript{171} He was sent to run his Uncle Thomas’ farm in Pittsfield, and from there he quickly turned to teaching. Peter Gansevoort thoughtfully sent books, and Melville replied, explaining that the Sikes District School left him more impressed by Common Schools in theory than in practice. Here his only real discussion of students suggests that he actually focused on \textit{mathematics}. At least his only curriculum-based discussion of his “scholars” was this seemingly baffled account: “some of them who have attained the ages of eighteen can not do a sum in addition, while others have travelled through the Arithmetic: but with so great swiftness that they can not recognize objects in the road on a second journey: & are about as ignorant of them as though they had never passed that way before.”\textsuperscript{172}

One term of teaching was enough. (Melville left amidst rumors that students were threatening to “lick” him). And by January he was back in Albany, “determined to become involved in the city’s intellectual life” and reclaiming his place in debating societies.\textsuperscript{173} In the midst of claiming his place and contemplating his next career move, Gansevoort became too sick to work. The family moved to across the river to Lansingburgh, and Melville needed to find a way to support them. His solution, however, wasn’t to write or to read law. Instead he took up engineering. This was, of course, a field that seemed to promise steady work amidst unprecedented expansion. “In an era of almost unlimited development of railroads and canals, a career as an engineer offered wide opportunity and substantial economic rewards for ambitious neophytes.” But, as Gilman speculates, Melville may have also been “revealing an influence that had lain dormant since he was a pupil of George W. Carpenter” at the Academy, who became a civil engineer. And

\textsuperscript{171} Herman Melville: A Biography, 1:104, 107-108, 113; Gilman, \textit{Melville’s Early Life and Redburn}, 83.

\textsuperscript{172} Herman Melville: A Biography, 1:114-116; Gilman, \textit{Melville’s Early Life and Redburn}, 84-85; Herman Melville, \textit{Correspondence} (Northwestern University Press, 1993), 7-9.

\textsuperscript{173} Gilman, \textit{Melville’s Early Life and Redburn}, 90; Robertson-Lorant, \textit{Melville: A Biography}, 63.
in a trade shop, and teaching mathematics—all before returning to school to become not just an engineer but a surveyor—a field which, like navigation, was linked primarily to geometry and trigonometry, along with maps and charts.174

In 1838 Melville started “the final chapter” of his formal education: two quarters in “the engineering and surveying course at the Lansingburgh Academy,” just a few blocks from his family’s house. Peter recommended the school, which was by no means limited to technical education. Tuition was only $5 a quarter, but Lansingburgh was an Academy, which “boasted an extensive library and laboratories for the study of natural philosophy, chemistry, and astronomy.” It also contributed to the meteorological program. The Principal, Dr. Ebenezer Maltbie, had just finished a work of “zoological taxonomy.”175 And the course was thorough. In mathematics Melville and his fellow students “had to make ‘constant use of the blackboard, and to give full explanations of the principles’ on which they based their answers.” Melville learned his “logarithms, trigonometry and the use of rod, chain, & theodolite” from Jeremiah Day’s The Mathematical Principles of Navigation and Surveying or Charles Davies’ Elements of Surveying, both of which were in use in the Academy at the time. The school also had a “valuable Library and Apparatus, illustrative of the science of Natural Philosophy, Chemistry, and Astronomy.” And Gilman finds that “here Melville may have extended the scientific knowledge that was the main object of his studies and laid the foundation for his mature interest in natural science.”176

174 Gilman, Melville’s Early Life and Redburn, 102-103; Robertson-Lorant, Melville: A Biography, 67. For more on surveying see, for example, Charles Davies, Elements of Surveying and Navigation: With a Description of the Instruments and the Necessary Tables, which was published in a number of editions beginning in 1830 and which was on the New York Board of Regents’ list of books. It’s also worth noting—given Melville’s preoccupations—that in the 1830s a surveyor was someone who made maps.

175 Titus, “Herman Melville at the Albany Academy,” 8; Robertson-Lorant, Melville: A Biography, 67; “Melville Attended Lansingburgh Academy,” The Record Newspapers, Troy, N.Y. Saturday, February 7, 1970. B4. Interestingly enough, Titus says November 1838, but the Troy Record, claims Spring 1838. Notes in the New York Public Library’s Gansevoort-Lansing collection (Box 310, Folder 10) indicate that this article was part of The Lansingburgh Historical Society’s official celebration of “The Herman Melville Sesquicentennial” in October 1969.

176 Gilman, Melville’s Early Life and Redburn, 103. For the book manuscript I plan to expand this section with the “Lansingburgh Schools Collection” of archival material at the New York State Library.
Melville was tellingly able to complete the curriculum expeditiously, graduating with Honors in the Spring of 1839—and receiving a strong personal recommendation from Professor Maltbie. At that point Peter Gansevoort stepped in, introducing his nephew to William Bouck, the current Canal Commissioner who went on to become the governor of New York. Unfortunately the introduction, a formal letter from Peter, and Professor Maltbie’s recommendation somehow weren’t enough. “Herman Melville, a young man of talent and good education,” Peter explained, “was desirous to obtain a situation in the Engineer department of the Canal.” ¹⁷⁷ And only when that failed—or when nothing came of his inquiries—did Melville turn to writing. “Within two or three weeks of his failure to hear from Bouck,” Melville submitted his first manuscript. Or in Gilman’s apt phrasing: “in the dual emergency created by failure to secure the canal position and his mother’s indebtedness”—and at the conclusion of his formal education, and this particular biography—“Melville called upon the only other talent he had” and submitted his first story.¹⁷⁸


¹⁷⁸ Gilman, *Melville’s Early Life and Redburn*, 108. Here’s Titus: “Melville’s failure to gain a position in this field was followed by his first published literary efforts and his subsequent shipping to sea.” Titus, “Herman Melville at the Albany Academy,” 8. Finally, While it’s beyond the parameter of this particular chapter, when his career as an author was still nascent—or just after the publication of Typee—Melville was still interested in positions linked to mathematics. He headed to Washington in February 1847—just one month after Joseph Henry’s official start at the Smithsonian—specifically with the goal of obtaining a position in the Treasury Department. And instead of simply remaining content with “several strong letters” from “prominent persons” influential to “the seat of government,” he wrote Peter Gansevoort, asking for a letter of introduction to meet with a Senator he’d never met. Peter did write, and the Senator was John Dix, who tellingly spent an evening with Henry the very next week. Melville, *Correspondence*, 81, 586; Jay Leyda, *The Melville Log*, 234-235; Parker, *Herman Melville: A Biography*, 1:484-486, 494.
1. Material Circulation

The first words of *Moby-Dick* tell us that our “etymology,” formation, or derivation of the word “whale” is provided by a “Late Consumptive Usher to a Grammar School.” He is, more specifically, a “pale Usher—threadbare in coat, heart, body, and brain.”

“Consumption” may very well be what Edgar Allan Poe died of in 1849, just before Melville began his masterpiece. And meanwhile critics argue that Poe is the basis of Melville’s “haggard,” “ragged,” “beggar” in *The Confidence-Man*. That figure, described as an “original genius”—arguably Melville’s highest compliment—has a “tattered, single-breasted frock-coat,” “slender” build, and “crazy” disposition. This certainly renders him threadbare in at least coat, body, and brain.

More importantly, in Poe’s “Fall of the House of Usher,” Lady Madeline is often said to have consumption. And both she and Roderick Usher are certainly consumed—in house, lineage, and body—at the end of the story that bears their name. In fact, “Usher” shows that anything that attempts to provide a house, or *case*, around an usher, or *process*, ultimately cannot hold: coffins included. During a whirlwind, the house collapses into a tarn: a mountainous lake. This inward collapse into some *singularity* takes place because of magnetism. And, finally, as our narrator sees the “mighty walls” “rushing asunder,” we find that his “brain reeled.” He becomes unstable.

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2 At the very least, we know that Poe’s father, his sister, and his beloved wife, Virginia, all died of consumption.


4 This idea of an “original character” is the topic of the 44th chapter of *The Confidence-Man*. Herman Melville, *The Confidence-man: His Masquerade* (Evanston: Northwestern University Press, 1984).

Moby-Dick proves to be similar. Ishmael’s story ends with the Pequod’s collapse into the totalizing sea, such that “one vortex carried the smallest chip of the Pequod out of sight.” And it begins with his description of electro-magnetic forces drawing people toward the water: the streets surrounding the “insular city of the Manhattoes” all “take you waterward,” toward “the Battery.” With crowds “pacing straight for the water,” he surmises: “does the magnetic virtue of the needles of the compasses of all those ships attract them thither?” And notions of traditional agency are challenged concomitantly with this “pull.” Ishmael famously configures the “soul” as an “insular Tahiti” surrounded by “universal cannibalism of the sea.” He imagines that nothing but “the limit of the land” could possibly “content” the “inlanders.” These surrounded “agents,” under siege, are, of course, my focus. And my suggestion, in this section, is that they will, ultimately be consumed because they are made of the same “stuff.”

Melville may very well have drawn from Poe’s story as he wrote Moby-Dick. “Usher” starts with dreariness, much like the “damp, drizzly November” within Ishmael’s “soul” at the start of his narrative. The House of Usher has “eye-like windows” and is portrayed as a body. Meanwhile, in “The Carpet-Bag” Ishmael declares: “Yes, these eyes are windows, and this body of mine is the house. What a pity they didn’t stop up the chinks and the crannies though, and thrust in a little lint here and there.”7 Peter Coffin’s Spouter-Inn also has a fissure. As does the House of Usher. In fact, it has—from its roof to the tarn below—a “barely perceptible fissure” that extends “in a zigzag direction.” That fissure is not unlike Ahab’s “slender rod-like mark”: a scar, or welt like the “perpendicular seam” of a tree, struck by lightning. And, finally, of course, Ahab’s body—like these houses—also has a “leak.”

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6 Melville, Moby-Dick, 426,18-19, 225, 263.
7 Melville, Moby-Dick, 18, 25; Poe, Edgar Allan Poe, 317, 318, 326. For a helpful account of Melville and Poe as patrons of William Gowan's bookstore, who may have browsed similar books—or met one another—or read each other’s work, see William Engel, Early Modern Poetics in Melville and Poe (Routledge, 2016), 3. Engel does not make claims about source texts, but Poe’s work was published in 1839.
8 Melville, Moby-Dick, 109, 363; Poe, Edgar Allan Poe, 320, 335. This usage occurs before the idea of an “electrical leak.” But Melville does occasionally refer to models that frame electricity as fluid.
While these similarities are certainly interesting—and while Melville’s authorial debts to Poe have not been discussed in detail since Perry Miller’s *The Raven and the Whale* (1956)—I draw on these comparisons here because I would like to reframe Melville’s characters in terms of this idea of leaks that move inward, or that ultimately produce a kind of singularity. This process is more visible in “Usher”—a less “blubbery” short story. But it also pervades *Moby-Dick*, as Ahab’s “leak” gives way—or “breaks” and “cracks” and lets a storm “burst in upon him.” Ishmael, of course, has similar concerns, as I suggested in my introduction. In fact, he responds to the “tempestuous wind Euroclydon”: “yes, these eyes are windows, and this body of mine is the house. What a pity they didn’t stop up the chinks and the crannies though.” Here Melville’s Biblical reference even suggests that this may be universal. “Euroclydon” is the wind that destroys St. Paul’s ship. And Paul goes on to notably describe humans as “leaky vessels.”

Ishmael’s consideration of this “tempestuous” and penetrating “wind” even happens specifically at Peter Coffin’s “Spouter Inn,” complete with its iconic door sign: a white painting “representing a tall straight jet of misty spray.” Upon viewing it, Ishmael tellingly declares: “Coffin?—Spouter?—Rather ominous in that particular connexion, thought I.” And here he clearly represents the relationship between generativity and dead, closed cases that I spelled out in my section on “The Case.” These moments, I think—among many others—are about the impossibility of closure or containment of any living body.

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10 As I suggested in my introduction, Poe’s model is ultimately different from Melville’s. So these are both singularities of kind (i.e. some sort of atoms), but while Poe imagines mergence into one unified entity, for Melville there is no singularity of substance: just indivisible building blocks of other elements and more. Poe imagines mergence into one unified entity, and Melville imagines continual circulation of many atoms.

11 Melville, *Moby-Dick*, 24


14 In my second chapter I define my particular use of the word “life” in detail, according to developments in Organic Chemistry in the 1840s.
This chapter traces Melville’s representations of a kind of perpetual “Material Circulation,” which shapes his textual representations of human bodies. I begin by describing the way that in *White-Jacket* and *Moby-Dick* Melville decomposes bodies by adding things to them. In fact, at its most extreme, they literally undergo phase changes (solid to liquid to gas) in response to electromagnetic forces (magnets to lightning to thunderbolts). For example, White-Jacket carries showers of rain “in his own proper person.” And Ahab is described as accumulating fiery emotion “within the Leyden jar of his own magnetic life.” But ultimately here my initial claim is that Melville’s humans leak. All that seems solid melts into the air in ways that show a radical kind of openness and permeability. And, second, in the process of “leaking” Melville’s characters become connected by way of dislocation: a logic that is rooted in both the experience of people shocking one another in an electric chain and in the atomic idea of decomposition by addition, or a kind of perpetual atomic exchange between agents or actors that are never discrete.

This chapter contextualizes Melville’s construction of humans that each serve as a kind of waif among electrical and atomic forces. I focus on Ahab because he is generally seen as such a remarkably strong, controlling, agent. And this reading holds despite the fact that his actions are inextricable from the ways that electromagnetic forces shape him: a Leyden jar, lightning, and a magnetized needle. Here I begin with terrestrial magnetism, or a detailed account of Ahab as a “Leyden jar.” Then I challenge readings of Ahab’s famous scene on “The Quarter-Deck” shifting focus away from both the economic impact of Ahab's gold doubloon and his alleged mesmerism—and towards the developing field of Electrical Biology, which developed in 1850 in Melville’s New York. This leads to related work on “Human Electricity,” which I lay out before concluding with the way that these accounts collectively give us a sense of Ahab’s unexpected passivity.

17 Paul Gilmore also mentions this phenomena, in passing, as Melville’s insistence “on the radical permeability of the individual self.” Gilmore, *Aesthetic Materialism*, 78.
Next I turn towards the broader environment that shapes these electromagnetic changes, or the development and roles of the idea of “Atmospheric Electricity.” In this section I focus on “impalpable” but supposedly geologic and meteorological changes in Pierre, emphasizing the fact that especially in the nineteenth century amidst the stunningly rapid development of the sciences as professional fields being “impalpable” was not the same as being absent. As this section concludes I focus on the secondary idea that frames this chapter: the importance of responding to Melville’s work without assuming that his scientific references are always metaphors. Instead I take his claim that even the “tiriest emotions of life” are ultimately “lost in the mid-regions of the impalpable air” very seriously. And I engage with the idea that circulating atoms and charges are at Melville’s humans’ very base. Melville’s humans, I explain, are perpetually permeated by the “subtile causations” and “subtle agencies” that atomically reform and electrically recharge them. This is the central conceit of work on “atmospheric electricity,” which posits that we are always affected by our environmental surroundings: continuously struck by lightning on a much smaller, if not imperceptible, scale.

After engaging with both terrestrial and atmospheric magnetism I turn to Melville’s “atoms,” or the material that drives these continuous, generative transitions. I begin with a detailed discussion of the infamous “vortex” at the end of Moby-Dick, which becomes not an afterthought in a political allegory but an agent in its own right. The vortex is ultimately the non-human actor that shapes Moby-Dick. And it offers an especially helpful way of conceptualizing Melville’s ontological account of circulation that is simultaneously destructive and creative. I ground Melville’s logic in a series of his sources, claiming that Lucretius’ and Descartes’ vortices, Thomas Beale’s Natural History of the Sperm Whale, and William Redfield’s work on hurricanes all contribute to this idea of perpetual exchange between agents and their atmospheres. And ultimately my claim is that Melville draws on an idea about material rebirth that is as old as Lucretius: the way to “reverse the decree of death” is to “let all die, and mix again!”
Finally, after contextualizing this interest in material circulation I conclude by asking: what circulates? Or: what are these atoms? This becomes a crucial question in a chapter that discusses Melville’s interest in “impalpable” materials that include atoms, charge, snowflakes, sediment, and “the impalpable air.” I claim that Melville draws on models as different as Lucretius’ atomism, Descartes’ corpuscles, and contemporary work built on the “chemical atomism” that drove developments in atmospheric electricity. But ultimately his interest was less in their distinctions than in their shared role as models of an “imponderable substance.” In short: entities like electricity, heat, and magnetism that obviously had physical existence but that didn’t possess the qualities usually associate with matter, like weight, solidity, and mass. I suggest that it is ultimately impossible to isolate one source because so many possibilities present themselves—and Melville intentionally blends them. But whatever these atoms, particles, or elements are ontologically, for Melville they collectively produce a kind of determinism. In fact, Melville directly rejects the “swerve” that differentiates Lucretius from the other theorists he makes use of.

I conclude by explaining that ultimately—in mapping impalpable but quite powerful “material circulation”—Melville draws out an important element of thought developed by theorists like Bruno Latour and Alfred North Whitehead: the idea that causation always takes place on multiple levels below the threshold of our conscious awareness. And we can only ever “know” of those “subtle agencies” through speculation—or what Melville describes as “surmises.” This turn to “speculative materialism” gives us a way to finally make sense of the first pages of *Moby-Dick*, from the silent “letter H” that drives the “Etymology” to the whales that somehow “floated” into his “inmost soul,” released by the “flood-gates” of Melville’s “wonder-world.” Ultimately this chapter frames, contextualizes, and situates the connection between atoms, electricity, wind, and Melville’s whales: all interconnected, invisible agents behind the “visible objects” that serve as Ahab’s “pasteboard masks.”
Melville’s Leaks

When Starbuck worries that the leak in the “hold” is the crew’s precious oil, Ahab cries: “‘let it leak! I’m all a-leak myself!’” In fact, he indicates that everything is leaking: “‘Aye! leaks in leaks! not only full of leaky casks, but those leaky casks are in a leaky ship.’” But Ahab’s leak is different: “‘Yet I don’t stop to plug my leak; for who can find it in the deep-loaded hull; or how hope to plug it, even if found, in this life’s howling gale?’”18 One can hope to caulk a ship, but Ahab is less sure about bolstering himself against his stormy interior or the world around him.

Ahab’s “leak”—counterintuitively external pressure moving inward—cannot be stopped because whatever “amplified fortifications” buttress his inner “citadel,” his character quite simply is not strong enough.19 At the end of the day, Ahab seems to be nothing but an instrument of his environment, or to borrow from White-Jacket, a “universal absorber,” not an “impervious” coat.20 For example, we find, in the chapter on “Ahab,” that “as the sky grew less gloomy,” Ahab “began to grow a little genial.” In fact, “he became still less and less a recluse” until “by and by, it came to pass that he was almost continually in the air.” And when he finally goes out whaling, he and his environment merge: “he looked not unlike the weather horizon when a storm is coming up”21

18 Melville, Moby-Dick, 362.
19 Melville, Moby-Dick, 263.
20 Melville, White-Jacket, 4.
21 Melville, Moby-Dick, 109, 137. The crew never does manage to find the Pequod’s leak. But they certainly do try. First they “hoist the Burtong only to find that “the leak “must be further off.” Then they “broke out deeper and deeper” until “so deep did they go; and so ancient, and corroded… that you almost looked next for some mouldly corner-stone cask containing coins of Captain Noah.” But that’s all we’ll ever know. Ishmael abruptly shifts the plot to Queequeg’s coffin. This is actually quite telling. The coffin becomes a somewhat baffling “life-buoy” when the carpenter is forced to caulk its seams. But to that end, it becomes Ahab’s uncanny double: Ahab asks Perth, the Pequod’s blacksmith, to forge, or weld, his “seam.” But Perth replies that he can weld “all seams and dents but one.” So Ahab leaks, and Ahab drowns. But the coffin bounds up like a buoy—and then saves Ishmael. My interest, here, is that the distinction between Ahab and the coffin doesn’t turn on the seemingly obvious distinction that Ahab is a human, but the coffin’s made of wood. The Pequod’s leak, as we’ve just seen, is just as deep as Ahab’s. And the distinction between the two figures is ultimately structural: the coffin bounds up because it is sealed shut.
This loss of the “self,” to “environment,” especially near water, is a frequent Melvillian trope. Each actor has an undeniable connection with its surrounding environment, which acts upon its “disposition.” For example, in *White-Jacket* we find that “the truth” in stormy circumstances is that with the “unutterable sights that fill all the eye, and the sounds that fill all the ear,” agents become consumed. Melville explains: “You become identified with the tempest; your *insignificance is lost* in the riot of the stormy universe around.” Then when sailors cross the vicious Cape on the good ship Neversink, “all of a sudden the ship was seized with such a paroxysm of rolling that, in a single instant, everything on the berth-deck—pots, kids, sailors, pieces of beef, bread-bags, clothes-bags, and barges—were tossed indiscriminately from side to side. It was *impossible to stay one's self*; there was nothing but the bare deck to cling to.”"\(^\text{22}\)

“The truth seems to be,” we find later in *White-Jacket*, that:

All people should be very careful in selecting their callings and vocations; very careful in seeing to it, that they surround themselves by good-humoured, pleasant-looking objects; and agreeable, temper-soothing sounds. Many an angelic *disposition* has had its even edge turned, and hacked like a saw; and many a sweet draught of piety has soured on the heart from people's choosing ill-natured employments, and omitting to gather round them good-natured landscapes.

“All Gardeners,” Melville tells us, “are almost always pleasant.”\(^\text{23}\) This connection with environment ultimately takes precedence over any fantasy of autonomous, atomic agency—or the idea of a unified or indivisible subject. In each of these cases, *White-Jacket* tells us what he specifically, atypically flags as “the truth”: each actor has an undeniable connection with its surrounding environment, which acts upon its “disposition.”

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\(\text{But a vortex “carried the smallest chip of the Pequod out of sight.” Again: when Melville’s “cases” aren’t closed, their contents circulate. In fact, the only other exception to this final image of material circulation is with Ishmael, who offers a story from the outside, like another “closed case,” even declaring that, within the space of his text, that “the universe is finished; the copestone is on, and the chips were carted off a million years ago.” His story clearly emphasizes a case that’s closed. He explains that he can “see a little into the springs and motives” that induced him to perform his part “now that [he] can recall all the circumstances;” or look back at a closed set of data. Melville, *Moby-Dick*, 22, 25, 362-363, 370, 394, 427.}\)


Richard Dean Smith offers a way for us to make sense of this transition from external weather to physical composition in a way that doesn’t simply assume that these are *metaphors*. He suggests that we might think of Melville’s references to “atmosphere” not only in terms of surroundings, but also in terms of gas laws and pressure.\(^{24}\) This maps wonderfully with our first description of White-Jacket’s jacket. He tells us: “waterproof it was not,” “no more than a sponge,” so, “in a rain-storm I became a universal absorber; swabbing bone-dry the very bulwarks I leaned against. Of a damp day, my heartless shipmates even used to stand up against me, so powerful was the capillary attraction between this luckless jacket of mine and all drops of moisture. “Capillary attraction,” as I’ll discuss, references one substance that absorbs another. And the stock example is a sponge absorbing liquid, which White-Jacket certainly did. Beyond that, however, White-Jacket also “attracted” his shipmates. They stood against him specifically not for warmth or because space was tight but because of asymmetrical densities. His jacket absorbed their moisture—which, with the storm, recomposed him. He tells us: “Me? Ah me! Soaked and heavy, what a burden was that jacket to carry about, especially when I was sent up aloft; dragging myself up step by step,” such that, not on but “in my own *proper person*, did many showers of rain reascend toward the skies, in accordance with the natural laws.”\(^{25}\)

Here a series of phase changes—from solid, to liquid, to gas—help White-Jacket finally break free from his “jacket.” He plunges from the mast of the *Neversink* dragged by “the irresistible law of gravitation,” is pervaded by “the eddying whirl and swirl of the maelstrom air,” and finally he “gushed into the sea” as a liquid, explaining: “some current seemed hurrying me away; in a trance *I yielded*, and sank deeper down with a glide.” This certainly seems to be his destruction. But we find, instead, that it is only *dissolution*. “White-Jacket,” as a liquid, still,


somehow, has his jacket. And only after “the force of [his] fall was expanded”—when he
“bounded up like a buoy” as his jacket “puffed out” with air—could he cut his coat away.  

We might even think of White-Jacket’s jacket as a play with the notion of atmosphere: “a
gaseous envelope surrounding any substance.” After all, White-Jacket is named for this
“porous” jacket, which he hoped to make “impenetrable” with paint. As a top-mast man, he often
goes into the “air.” And his jacket causes him to be mistaken as a “ghost.” This may seem to
overstate the case, but in Moby-Dick, we meet a whale that, quite similarly, rises “more buoyant
than in life” once it’s been killed. This description, which initially seems to invite religious and
metaphysical interpretation, not the invocation of natural laws, continues: “the reason of this is
obvious. Gases are generated in him; he swells to a prodigious magnitude; becomes a sort of
animal balloon.” This material buoyancy certainly seems equivalent to White-Jacket’s “puffing
out” and “bounding up.” And this explains the moment when, as the scene closes, the crew drags
“him,” without his jacket, “out of the water into the air.” There White-Jacket reports: “the sudden
transition of elements made my every limb feel like lead.” Then he “helplessly sunk into the
bottom of the boat.” He’s undergone a phase change.

Finally, these transitions are driven by electromagnetic forces. Gaseous atmospheres were
seen as outer envelopes of “effective influence” driven by electric or magnetic forces, and that
clearly holds true here. White-Jacket’s first transition to liquid occurs along with the sound of a
“thunder-boom.” He also returns to solid form with the aid of electricity: “the thrill of being alive
again tingled in my nerves, and the strong shunning of death shocked me through.” That impulse

26 Melville, White-Jacket, 392-394.
28 Melville, White-Jacket, 4, 78.
29 Similarly, in Moby-Dick’s final passage, the crew looks for the Pequod and, instead, “saw her sidelong
fading phantom, as in the gaseous Fata Morgana”: a mirage, usually of ships, that occurs because of
differences in the temperature of air and water but that, originally, was thought to be magic. The phantom,
like Ahab’s phantom limb, has a material explanation. Melville, Moby-Dick, 284, 426, 360.
30 Melville, White-Jacket, 394. Melville also discusses “phase changes,” or, at least, the lack of clear
distinction between liquid and gas in “The Fountain.” Melville, Moby-Dick, 372-373.
was triggered by an “inert” gas, or when he brushed against a “fashionless form.” And finally, it left him to hang, “vibrating in the mid-deep,” until he experienced a pressure change and then “bounded up.”

We see a similar pattern in *Moby-Dick*, where whales are like lightning for Ahab’s “howling gale.” Whales compel Ahab. Whales prompt his “leak.” And whales have a kind of power that is like magnetic force. When all three boats manage to plunge their lines into one whale, for example, it stirs, and suddenly they “vibrated in the water, distinctly conducting upwards to them, as by magnetic wires, the life and death throbs of the whale, so that every oarsman felt them in his seat.” When the Pequod needs to lower its lightning rods in “The Candles,” Ahab exclaims: “the white flame but lights the way to the White Whale!” This happens in the midst of an electromagnetic phenomena: St. Elmo’s fire.

And during the gam with the Samuel Enderby, Ahab makes this explicit. He calls Moby Dick “all magnet,” then adds: “what is best let alone, that accursed thing, is not always what least allures.”

Last but certainly not least, Ahab passes the charge along. When he asks his men, in “The Quarter-Deck,” what they do when they see a whale, their “impulsive rejoinder” is described as “hearty animation into which his unexpected question had so magnetically thrown them.” This moment—the first real assertion of his apparent strength—is, specifically, magnetic. And by the end of the chapter Ishmael concludes that “it seemed as though, by some nameless, interior volition, he would fain have shocked into them the same fiery emotion accumulated within the Leyden jar of his own magnetic life.”

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32 St. Elmo’s fire is a "strange bluish or violet luminescence" that appears during thunderstorms around tall, pointed objects, like the masts of ships. Its name is derived from St. Elmo, the patron saint of sailors, but it is also described as "candles of the Holy Ghost" or as corpusants (i.e. holy body). The phenomena was common enough that Darwin describes it in *Voyage of the Beagle*, and Richard Henry Dana describes its effect on sailors in *Two Years Before the Mast* (New York: Harper, 1840), 434. For more see David Seargent’s *Weird Weather: Tales of Astronomical and Atmospheric Anomalies* (Springer, 2012), 178-180.


This apparent “nameless, interior volition” may seem to reference Ahab’s interiority, as does “his own magnetic life.” But in fact it only “seemed as though, by some nameless, interior volition” he could act. The image of the Leyden Jar subverts most notions of interiority. After all, it’s ultimately just a tool for the corporeal storage of “charge,” collected from other “agencies.” So at its most compressed, when we encounter the “Leyden Jar” of Ahab’s “own magnetic life,” instead of finding a dictator, we find a structure that stores and then distributes charge. We might be better served by considering Ahab’s influence, which is, consistently, the “full-forced shock” of his “electric” power. After all, as we find, in “The Needle,” “the magnetic energy, as developed in the mariner’s needle,” “is essentially one with the electricity beheld in heaven.” It is ultimately one, singular force, which he physically channels—and which, in “The Quarter-Deck,” he expels with his breath. External agencies provide Ahab with the capacity to “electrify” the metal weapons of his mates and harpooners, along with most of the crew, Ishmael included.35

35 Melville, Moby-Dick, 165-166, 516.
Leyden Jars and Ahab’s “Own Magnetic Life”

Leyden jars were an accidental discovery in 1745. While experimenting with electricity, Ewald von Kleist touched his electric generator to a nail that was stuck into a medicine bottle through a cork. Then after time passed he received a strong shock when he touched the nail. Kleist couldn’t begin to understand exactly what had happened, but he made the transformative discovery that the combination of a nail and a jar could store electric shock.

The first iteration of Leyden jars were filled with alcohol or water, since electricity was imagined as a fluid. A metal rod ran through the center of a cork that was used to close the jar. Then the top of the rod would be charged by some kind of generator. Once people realized that electricity was not a fluid—and could not be trapped in liquid—foil was used to cover both sides of the jar. Finally, by Melville’s moment a popular catalog in New York described a Leyden jar as something far more standardized. It was specifically a quart-sized glass jar that was coated in foil until two or three inches from its top. A wire reached through a cork lid, descending from a metal ball or knob at the top of the container. When that ball was finally brought into contact with a “prime conductor” it would store its charge. But when a hand—or some other conductor—touched the top of the jar, its two coatings would come into contact, creating an electric shock, potentially along with a spark. This process was “violent,” it was “sudden,” and it was imagined as an “imitation” “of a stroke of lightning.” So Leyden jars were seen as transformative inventions for two primary reasons: the pull of these dramatic effects and the fact that they could hold more charge than any “prime conductor.” Ultimately—for show or for science—Leyden jars could be discharged with great force at the experimenter’s will.36

36 Dionysius Lardner, Popular Lectures on Science and Art: Delivered in the Principal Cities and Towns of the United States (New York: Greeley, 1849), 118, 361; Benjamin Pike, Pike’s Illustrated Descriptive Catalogue of Optical, Mathematical and Philosophical Instruments (The author, 1848), 260, 310, 269; David Reid and Alexander Bain, Elements of Chemistry and Electricity: In Two Parts (Barnes, 1850), 73.
Leyden jars are so powerful because when their “metal balls” come into contact with a “prime conductor” a positive charge accumulates on the inside of the jar, which causes it to be repelled from the exterior coating. The strong and growing difference in polarity between the two sides was able to hold more charge than any generator could produce. But as Leyden jars became more standardized they became more user-friendly. A nineteenth-century jar could be held by its coat of foil. But then if a hand touched the glass at the top of the jar—or if both sides came into contact with the help of some other conductor—it would prompt a rapid discharge. This wasn’t limited to human hands, of course. Any materials “subjected to the influence of the electricity of the jar” would become part of its “circuit.” But as Melville tells us in “The Lightning Rod Man,” “man” is an especially “good conductor.”

37 Pike, *Pike’s Illustrated Descriptive Catalogue* 260, 269.

38 David Boswell Reid and Alexander Bain, *Elements of Chemistry and Electricity: In Two Parts* (A.S. Barnes, 1850), 73, 273-4.

39 Melville’s exact words are: “Yes, a man [sic] is a good conductor. The lightning goes through and through a man, but only peels a tree.” *Melville, Piazza Tales*, 123.
Originally shocks from Leyden jars were seen as violent and unsettling. In fact, the shocks were so “frightful” that in 1801 William Caruthers wrote Thomas Jefferson to ask whether they could be “hermetically sealed” and then “violently projected” as weapons. Leyden jars caused “nausea, headaches, nosebleeds, convulsions, and temporary paralysis.” But despite their vast potential harm, Leyden jars quickly became “an irresistible object of both philosophical curiosity and spectacular corporeal experience.”

Leyden jars were also used for experiments and a multitude of popular demonstrations, which were imagined as their central feature long before electricity had any commercial or industrial payoff. In a discussion of “Electrical Games,” for example, James Delbourgo tells the story of these social, interactive demonstrations in the eighteenth-century. Men used electric machines to produce friction against the hands of “lady companions,” boys were suspended by silk cords and electrified in midair, and girls gained the ability to attract and repel chaff by waving their hands. But the most common electrical game involved having a room full of people hold hands and pass around a shock. These “electric chains” were rooted in a famous series of experiments from the 1740s, which were conducted separately by Jean Nollet and Pierre-Charles Le Monnier. But thanks to the production of smaller, increasingly affordable equipment—led, of course, by Leyden jars—by the end of the eighteenth century these public spectacles were able to enter the home. This shift to “Science in the Parlor” helped domesticate science in the United States. And electricity continued to be more of a curiosity than an industrial tool until the 1850s, when the invention of the telegraph, electric lights, and other technologies clearly changed the landscape.

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42 Sam Halliday, Science and Technology in the Age of Hawthorne, Melville, Twain, and James: Thinking and Writing Electricity (Macmillan, 2007), 9.

43 Delbourgo, A Most Amazing Scene of Wonders, 112.
Melville watched the transition from electricity as a form of this kind of entertainment to a mysterious force that was able to transform both commerce and technology. The telegraph—which I discuss in detail in my prefatory biographical chapter—was the most visible token of what new work in electromagnetism could do. It transformed communication, prompted exploration in medicine, and arguably materialized “thought.” But electricity still loomed large in the popular imagination in ways that were aided by these stunning new inventions. At the very least it played a starring role in the public sphere, as advertisements for lectures clearly indicate.

This broadside from J.S. Swift’s Lectures in New England gives a sense of popular interest in the uses of electricity and magnetism as Melville was writing.

Image courtesy of the Bakken Museum of Electricity and Life.

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44 Rutter, Human Electricity, iii.
This broadside from J.S. Ross’ Lectures on Electricity in 1850 gives a sense of popular interest in “scientific and practical” uses of electricity as Melville was writing. Ross lectured across New England and New York.

Image courtesy of the Bakken Museum of Electricity and Life.
People were well aware of electricity’s effects, and, again, by the nineteenth century this reached beyond public lectures and popular books to parlor games where people held hands and shocked each other. But the power of these moments of connection between persons was counterintuitively in dislocation. Bodies were conjoined and individual selves’ spatial coordinates were eliminated and replaced with new forms of Union.\(^45\) Not surprisingly, a number of American texts in the 1850s capitalized on this feeling of connection as a potent conceptual metaphor.\(^46\) Notable examples of this include the “electric chain” formed by Hester, Dimmesdale, and Pearl clasping hands on the scaffold or the way that Ethan Brand’s heart hardened exactly because it “ceased to partake of the universal throb” in the moment he “lost his hold of the magnetic chain of humanity.”\(^47\) We also find these references in authors that reach beyond Hawthorne. For example, Paul Gilmore makes compelling cases about this kind of logic in work by Douglass, Stowe, and Thoreau.\(^48\) And Melville draws on electricity in similar ways in both *Redburn* and “Hawthorne and his Mosses” when he writes that “genius, all over the world, stands hand in hand” such that “one shock of recognition runs the whole circle round.”\(^49\)

This logic of connection that is based in dislocation also shapes one of Melville’s most powerful scenes: the moment in “The Quarter-Deck” when Ahab is framed as a “Leyden jar.”\(^50\)


\(^{46}\) Here I draw on George Lakoff and Mark Johnson’s idea of the “conceptual metaphor,” or the idea that concepts are derived from actual sensorimotor experience; the most famous example is that “categories are containers.” See *Philosophy in the Flesh* (New York: Basic Books, 1999). The point is that there is a material basis for a sense of national connection—and the idea of nations as “imagined communities.”


\(^{49}\) Herman Melville, “Hawthorne and His Mosses,” in *The Literary World*, vol. 7 (New York: Osgood & Company, 1850), 146. In the same year Melville’s *Redburn* describes commands that “run round like a shock of electricity” Herman Melville, *Redburn*, 164.

\(^{50}\) F.O. Matthiessen even begins an essay on Ahab by explaining that “Melville knew the strength of the contrast between the great individual and the inert mass. He expressed it in Ahab’s power to coerce all the rest within the sphere of ‘the Leyden jar of his own magnetic life.’” And while Matthiessen may be wrong about the frequent assumption that Ahab coerced his crew, he begins in the right place: the connection
First we find the mates and harpooneers with their weapons, as “the rest of the ship’s company formed a circle around the group.” Then Ahab has them pass around a “heavy charged flagon,” or a large, charged metal vessel, commanding everyone to drink. As soon as that charge begins to circulate he tells the mates to stand with their lances while the harpooneers stand with their irons. Then to make those weapons become linked conductors he tells the mates: “cross your lances.” Ahab touches their “axis,” or their “magnetic meridian,” and they begin to glow—“radiating” or emitting exactly the kind of force that could charge the larger circle. This is a world after Henry and Faraday’s discovery of electromagnetic induction, after all. And this is the moment of connection that prompts Ishmael to describe “the Leyden jar” of Ahab’s “own magnetic life.”

This moment of connection is also about dislocation. This is the scene that leads Ishmael’s shouts to go “up with the rest.” This is the time that he finally identifies as “one of the crew.” And, finally, in this moment his “oath” had been “welded with theirs.” Or, as Ahab frames it, this is the moment when every member of the crew was made party to one “indissoluble league.” And if we have any doubts that in this moment Melville frames Ishmael’s individuality as merged with the rest of the crew, we only have to turn to the fact that he disappears as our narrator for the next four chapters. His narration famously gives way to a series of short plays.

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52 The metal vessel or chalice was pewter, or a copper and tin alloy, which made it a very strong conductor (a mix of the second and fourth most effective metals). Iron, at the time, was the fifth best conductor. And, most importantly, textbooks and handbooks explained that “when iron is united with gold or zinc, the iron becomes incandescent.” Melville knew what he was doing, here, and this blends science and fiction. Leopold Gmelin, *Handbook of Chemistry* (London: Printed for the Cavendish Society, 1848), 310, 315.

53 In 1831 Michael Faraday and Joseph Henry “independently discovered that a changing magnetic field could induce a current in a conductor,” which means “action at a distance,” or without direct contact, was possible. “This phenomenon is known as electromagnetic induction,” which is described as a “technological turning point” so important that the world was never the same Tai L. Chow, *Introduction to Electromagnetic Theory*, (Boston: Jones & Bartlett Learning, 2006), 171.

54 Melville, *Moby-Dick*, 166, 179. This scene of connection by way of dislocation also seems to be repurposed in “A Squeeze of the Hand.” Here squeezing sperm in a circle leads to “unwittingly squeezing my co-laborers' hands in it” before finally ending with a fantasy of being lost into each other: “Come; let us squeeze hands all round; nay, let us all squeeze ourselves into each other; let us squeeze ourselves
Almost every account of “The Quarter-Deck” focuses on Ahab’s exceptionalism, framing him as both a leader and a strong, controlling agent. Michael Rogin, for example, explains that “Ahab resists fraternity by manipulating mechanical power.” Here he points to Ahab’s claim: “my one cogged circle fits into all their various wheels, and they revolve.” Rogin describes this specifically as Ahab’s “magnetic ascendancy” over his crew.\(^\text{55}\) And Paul Gilmore, in turn, draws on “Melville’s use of electric imagery in ‘The Quarter-Deck’ to figure Ahab’s power over the sailors on board the Pequod.” For Gilmore this iconic scene draws our attention to “the dangers” of Ahab’s “aesthetic, charismatic electricity,” even pointing out that Ahab seems to “make the electrified crew an extension of his body.”\(^\text{56}\) Finally Sam Halliday explains that Melville’s engagement with electromagnetic “power” takes “two characteristic forms in his fiction”: one connected to oratory or rhetoric and the other to nautical or military rank. He sees Ahab as the figure upon which these two forms of power converge, especially on the quarterdeck.\(^\text{57}\)

My argument, conversely, is that Ahab’s status as a “Leyden jar” requires some level of interdependence with things that are external to him. His will was by no means omnipotent. Instead Ahab—explicitly suffering from monomania and an electrical imbalance—is framed as a Leyden jar, waiting to release his potentially deadly “full-forced shock.” As a Leyden jar we know that he is out of balance. That imbalance was created by an external “prime conductor.”

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\(^{56}\) Gilmore, Aesthetic Materialism, 87. Gilmore also writes that “with its attention to Ahab’s ability to manipulate the sailors’ economic interests, Moby-Dick emphasizes how the capitalist revolution tended to reinforce hierarchies instead of producing radical equality. Rather than creating a universal harmony based in human commonality, aesthetic electricity will transform the masses, as the imperialist language of techno-utopian discussions of the telegraph similarly hinted, into merely a reflection of one controlling personality, parts of a body controlled by one central authority, or as Ahab megalomaniacally puts it near the end, ‘Ye are not other men, but my arms and my legs; and so obey me.’” Gilmore, Aesthetic Materialism, 78.

\(^{57}\) In Typee, for example, Halliday explains, a speaker produces an “electric” effect upon his audience. In White-Jacket one large brain and heart can “magnetise a whole fleet or an army.” And, of course, with the Leyden jar Ahab draws on both his oratorical power and his command as the Pequod’s captain. Halliday, Thinking and Writing Electricity, 110.
And if we take this description seriously then Ahab is dependent upon the people and things that might transform his charge. Rogin recognizes this tension between apparent strength and ontological interdependence when he explains that Ahab’s exploitation of technology really shows that he is ultimately also “in the power of the machine.” Or as Ahab explicitly tells us: “the path to my fixed purpose is laid with iron rails, whereon my soul is grooved to run.”

Gilmore offers a similar claim: that Ahab is actually dependent on interconnections with both objects and his crew. There is, Gilmore explains, an “ambiguity” in Ahab’s “electric power.” While he does clearly threaten to “shock” his charge into his crew he wouldn’t only alter them. Instead in making “the electrified crew” a kind of “extension of his body” he would complete an “electrical circuit” that would force him to acknowledge his “mortal interindebtedness.” Gilmore goes on to discuss exactly that kind of merger in Moby-Dick’s final chapter, when Ahab “proclaims that his sailors are ‘not other men, but my arms and my legs.’”

Here it is important to remember that Ahab never shocks his crew in the kind of violent way reminiscent of Leyden jars as weaponry. Instead—despite a number of references to weapons—this interaction, however ominous, is more like a parlor game. Ahab’s goal is not to kill the crew. He tries to magnetize them. Just after the moment of the mates’ three crossed and radiating metal lances Ahab cries out: “In vain!” as if they did not take his charge. Then he decides: “but, maybe, ’tis well. For did ye three but once take the full-forced shock, then mine own electric thing, that had perhaps expired from out me. Perchance, too, it would have dropped ye dead. Perchance ye need it not. Down lances!” Instead of attempting to “discharge” himself again — shocking his crew and restoring his own balance — Ahab decides it may be for the best. He never makes a second attempt. Instead he seems concerned that with so much charge stored up the “full-forced shock” from his “electric thing” might kill Starbuck, Stubb, and Flask.

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58 Rogin, “Moby-Dick and the American 1848,” 145.
59 Gilmore, Aesthetic Materialism, 87.
After deciding not to shock his crew, Ahab takes a new approach. And here we should turn to discussions of “electrical biology” and “electrical psychology.” These practices were sometimes imagined to be related to Mesmerism, as when, for example, Thomas Welton offered that “the sciences of Electro-Biology and Electro-Psychology are identical, and, no matter which of these terms are used, mean absolutely the same thing, also that Mesmerism, Animal Magnetism, and Odic Force are three names for one and the same electrical force emanating from all persons.” Welton, however, notably practiced the “art” of mesmerism and selected that particular term to cover these different fields of “fascination.” Meanwhile a number of other authors insisted on a meaningful difference. Here George Stone is the most explicit: “many persons have the impression that, after all, Electro-Biology is but mesmerism. In answer to such I will say, that there is a very marked difference between the two sciences.” “Mesmerism,” Stone explains, “is the doctrine of sympathy; Electro-Biology is the doctrine of impressions.” The first is about the relationship between the “magnetiser and subject,” while “the person in the Biological state has no such sympathies with his operator” and, instead, exerts his will against him.

Darling makes the same point when his *Electrical Psychology* begins by differentiating electrical psychology from mesmerism. Instead of being driven by “sympathy with the operator,” he explains, psychology is about more mechanical “impressions.” In fact, thousands of people are “naturally in the Electro-Psychological state.” If an operator does become a conduit, Darling finds that the subject is placed in a very different position from a “mesmeric slumber.” Instead of having sympathy he “exerts his will.” And finally, Darling adds, instead of waking without recollection the subject is “perfectly conscious of all that has taken place” and is “a witness of his own actions, however ludicrous they must have been.” In short: like Ishmael, he can tell his tale.

60 Thomas Welton, *Fascination: Or, the Art of Electro-Biology, Mesmerism, and Clairvoyance, Familiarly Explained, with Cases for Reference*, 1865, 6.


Turing to this model from electro-biology helps us sort out what happens instead of a shock: Ahab finds a better way to “charge” his crew. As I mentioned in my discussion of the Leyden jar this begins with the “charged flagon” and an unexpected “circle” that references the long tradition of “science in the parlor.” But, beyond that, the first test Welton references in his account of electro-biology begins with a “round disc” of zinc and copper between one and two inches in diameter. Subjects were asked to “look intently” at the copper for about twenty minutes. Then experimenters examined them. And the answer to their electric state was in their eyes. “Those whose eyes are wide open,” he tells us, “reject,” while “those whose eyes are closed, or have the tendency to close,” needed more intense treatment—which involved joining hands to form a chain while a being shocked by galvanic battery and its magnetic wires.63

Here we can revisit “The Quarter-Deck” in terms of electro-biology, along with the suggestion that Ahab’s goal is to magnetize his crew. The scene begins with Ahab’s question: “What do ye do when ye see a whale?” Here Ahab responds with atypical “wild approval” to the “hearty animation” into which his “question had so magnetically thrown them.” Soon after the crew was surprised that they “became so excited at such seemingly purposeless questions,” “excited” potentially referencing both their emotional states and common accounts of electrical “excitement” or charge.64

This is the moment that Ahab produces the doubloon, which he introduces in a way that clearly matches instructions for work in electro-biology. Welton explains that to test whether a group has been “impressed” electro-biologists should present a round metal disc, then ask subjects “to look intently on the copper in the centre.” That disc should be held in “the palm.” And the answers will be in their eyes.65 Ahab’s introduction to the gold doubloon, in turn, is:

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63 Thomas Welton, Fascination, 8.
64 Melville, Moby-Dick, 161. For “excited” as a technical term, see Lardner, A Manual of Electricity, 14.
65 Thomas Welton, Fascination, 8.
“Look ye! d’ye see this Spanish ounce of gold?” Here we find Ahab “holding up a broad bright coin to the sun.” It seems to be in the palm of his hand. And finally, he captures their attention even more intensely, hammering the gold coin to the mast while promising, quite clearly:

“‘whosoever of ye raises me that same white whale, he shall have this gold ounce, my boys!’”

As this scene unfolds Ahab and Melville—following instructions from electrical-biology—clearly follow the crew’s eyes. First we learn that the harpooneers “looked on with even more intense interest and surprise than the rest.” (Again: “those whose eyes are wide open” “reject”). Then Starbuck has a similar response. We find him “eyeing his superior with increasing surprise.” This failure drives Ahab to his most stunning soliloquy: that all “visible objects” are really “pasteboard masks.” Ahab actually feels “joy” when his account leads Starbuck to a state of “enchanted, tacit acquiescence.” But that joy is short-lived. “Again Starbuck’s downcast eyes lighted up with the stubbornness of life”: a look that was also a rejection of Ahab’s connection.

Ahab responds to the promise of Starbuck’s “downcast eyes” by following Welton’s suggestion for an alternative approach. Welton offers: “you may, if you have a galvanic battery and coil, dispense with the zinc discs,” instead reverting to the more traditional “electric chain.” So Ahab has his crew form the circle around the magnetized lances of his mates. Then he checks their eyes one more time. At least, we find Ahab “searchingly eyeing every man of the crew.” Their eyes still all meet his just like the eyes of “prairie wolves meet the eye of their leader.” But instead of being pleased that his crew responds submissively, Ahab plans to shock them. (Electro-biology certainly offers a plausible account of why their submission is insufficient).

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66 Melville, *Moby-Dick*, 162. These scenes also harken back to Ishmael’s “these eyes are widows.”

67 This response carries through, at least, the chapter on “The Needle,” when Melville explains that the harpooneers “remained almost wholly unimpressed; or if impressed, it was only with a certain magnetism shot into their congenial hearts from inflexible Ahab’s.” Melville, *Moby-Dick*, 518.

68 I discuss this soliloquy in detail in this chapter’s final section. Melville, *Moby-Dick*, 164, but it is also worth remembering atoms, charge, and anything that might qualify as one of Melville’s “subtle agencies”


70 Melville, *Moby-Dick*, 165.
While he does not, exactly, have the subjects of his experiments join hands to form a chain—attaching a Leyden jar to give them a violent shock—this is exactly the moment that Ahab passes the charged chalice, creating what seems to be an electric chain. Next Ahab grabs hold of the axis of his mates’ “radiating,” magnetized lances, expecting to produce an electric shock. Finally he “nervously twitched them,” clearly drawing on the link between electrical-biology and the nervous system. And when Ahab doesn’t experience the expected response he receives his sign. “The three mates quailed before his strong, sustained, and mystic aspect. Stubb and Flask looked sideways from him.” And even “the honest eye of Starbuck fell downright.” In short: there was no reason for Ahab to try to shock his crew because they were already charged.

Three possible objections to this reading surface quickly. The first is that Ahab’s doubloon is made of copper, while electro-biology calls for a disc made of copper and zinc. Obviously artistic license offers one account of this clear difference: Melville also wanted gold so the doubloon could serve as a magnetic and an economic object. But, in fact, even within work on the relationships between electricity and humans that disc—while made of copper—could have still inspired Ahab’s gold doubloon. Von Kleist, the inventor of the Leyden jar, initially used two objects as conductors: his fingers and a piece of gold. John Bovee Dods—who gave series of lectures on “Electrical Psychology” across New York before their publication in 1850—explains that this “electro-magnetic coin” can be made of “any other metal.” And, most importantly, gold, at the time, was the third strongest conductor, after silver and copper. But it was more effective in some situations—like on the mast of a ship—because it doesn’t corrode or oxidize.

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71 For this connection between the nervous system and electricity see John Bovee Dods, *The Philosophy of Electrical Psychology in a Course of Twelve Lectures*. (New York: Fowler and Wells co., 1850), 46.
72 Melville, *Moby-Dick*, 166.
73 “If, whilst, it is electrifying, I put my finger, or a piece of gold which I hold in my hand, on the nail, I receive a shock which stuns my arms and shoulders” he explained in his first account of his discovery. Frederick Bakewell, *Electric Science: Its History, Phenomena, & Applications* (London: Ingram, 1853), 15.
74 Dods, *The Philosophy of Electrical Psychology*, 188.
The second potential objection, in turn, is that Welton’s account of electro-biology was published in London in 1865. But a number of sources locate the source of this experiment in New York in 1850, or the year Melville was very actively writing *Moby-Dick.*

Andrew Wilson tells us, for example, that “Electro-biology’ first appeared about 1850 in the programme of two American adventurers,” who asserted that “a disc of copper and zinc held in the hand of the subject” led to “marvelous results” that affected “mental actions.” They could “paralyze muscles, subdue the strongest will, cause the senses to falsify the patient’s ideas, make the subject of their experiments obey every command, however arduous and extravagant, and influence his thoughts in any and every particular of life.”

William Carpenter offers a similar story: “in the year 1850, the art of ‘Electro-Biology’ was brought into fashion by two Americans, who asserted that, by means of an influence known to themselves, they could subjugate the will of others, paralyse their muscles, pervert the evidence of their senses, and even suspend all consciousness of identity,” through the process of gazing steadily at the copper disk.

Debates about the distinction between electro-biology and mesmerism often hinged on whether non-metallic objects like wooden discs or coat buttons could be as successful. But practitioners insisted on a difference, and when it appeared in 1850, the new “‘science’” reportedly “attracted a crowd of admirers.”

Finally, a number of scholars frame Ahab’s control over his crew in terms of mesmerism. This seems to have originated with Herbert Rothschild’s essay on “The Language of Mesmerism” specifically in *Moby-Dick’s* “The Quarter-Deck.” Rothschild’s account is that the language of that passage has “a very specific meaning,” which links directly to Franz Mesmer’s central claim:

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76 I selected Welton instead of contemporary sources because—as is often true in the moment history is made—they were less detailed and less programmatic as accounts of how experiments tended to be run.


79 Wilson, *Health for the People*, 30. When Melville was writing *Moby-Dick* John Dods lectured on mesmerism and related topics in New York. He discussed the fact that New York City alone was said to have 30,000 believers. And he adds that Melville “would necessarily have been exposed” to both “animal magnetism and the speculation surrounding it.” Rothschild Jr.,“The Language of Mesmerism,” 235–38.
“all things in nature possess a particular power, which manifests itself by special actions upon other bodies.” And, beyond that, they do so “without chemical union.” Rothschild’s textual evidence is not especially detailed, and his comparisons to Mesmer and Grimes fall short.  

But one passage that Rothschild overlooks could serve as evidence that Ahab uses mesmerism. When Ishmael tells us he “was one of that crew” and that his “shouts had gone up with the rest” he adds: 

“a wild, mystical, sympathetic feeling was in me; Ahab's quenchless feud seemed mine.”

This reading is widely accepted today. Inger Dalsgaard explains, for example, that this reference to a Leyden jar “strongly hints at mesmerism.” In fact she describes Ahab as a “hypnotic, charismatic, Mesmer-like figure” who somehow “cast a spell over his congregation.”

Sam Halliday argues that “Ahab asserts dominance over his crew” in ways that “draw heavily on mesmerism,” turning to a claim that Melville had “a career-long preoccupation” with “the power that a mind of deep passion has over feeble natures.”

Mark Patterson suggests that Ahab “tries literally to mesmerize his men” during “the odd ritualistic scene with the mates’ crossed lances” when the Leyden jar is invoked. Then he reads Ahab as someone who moved “into the realm of the charlatan” in the midst of a “parody of mesmeric therapy,” when patients were connected to electromagnetic power and “recharged.”

Finally, Maurice Lee describes Ahab as “part mesmerist, part actor, part preacher, [and] part tyrant” as he “speeds the Pequod to its doom” “overmastering Ishmael, the crew, and Starbuck’s middle-management.”

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81 Melville, Moby-Dick, 137, 304.


83 Sam Halliday, Thinking and Writing Electricity, 111.

84 Mark R. Patterson, Authority, Autonomy, and Representation in American Literature, 1776-1865 (Princeton University Press, 2014), 208

Despite this apparent consensus, working through accounts of electro-biology we find accounts that seem to be a much better match for Ahab. This reading doesn’t only help account for Ahab’s alternative to shocking his crew. It also offers a number of advantages over the mesmerism reading when we look beyond the doubloon. Electrical biology and electrical psychology describe subjects who (1) respond to material impressions instead of sympathy with the operator, (2) exert their wills, and (3) witness and remember their coerced activities, “however ludicrous they may have been.”

The real heart of electrical-biology and psychology lies in the importance of impressions. This is clearly more aligned with the reading of Ahab as a Leyden jar than mesmerism, since it is about the conservation of charge—or the exchange of positive and negative charge—which is very different from a practice that is more closely allied with hypnosis. And by “The Needle” we see explicit use of the rhetoric of electro-biological impressions, which become a compelling alternative to mesmeric sympathy. Here Ahab uses celestial navigation to determine that the Pequod’s compass needles had been turned by lightning. As he prepares to fix it Starbuck is skeptical but “acquiesced.” So did the men who “lowly rumbled.” But the harpooneers were still more resistant. They “remained almost wholly unimpressed; or if impressed, it was only with a certain magnetism shot into their congenial hearts from inflexible Ahab’s.” The harpooneers—to whatever degree they were “impressed”—were shaped specifically by Ahab’s “magnetism.” And this model of magnetic influence clearly extends beyond them to the rest of the ship’s crew. “Starbuck's body and Starbuck's coerced will were Ahab's,” Ishmael tells us, “so long as Ahab kept his magnet at Starbuck's brain.”

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86 I discuss what I mean by the mechanical, materialist term “impressions” in detail in this chapter’s final section, “Speculative Materialism.”

87 Melville, Moby-Dick, 518

88 Melville, Moby-Dick, 212; Halliday also discusses this passage and the weight of Starbuck’s opposition. Halliday, Thinking and Writing Electricity, 111.
Electrical-biology also leaves space for crew members who maintain distinct, resistant wills. We see this in “The Needle” when the mates “reluctantly acquiesced” and the crew “rumbled” quietly in opposition to Ahab. This happens in the sentence right before Ishmael explicitly mentions that the harpooneers, “if impressed,” were influenced by Ahab’s “magnetism,” which is to say: electro-biology is a clear influence. And this magnetic model leaves space for us to imagine the Pequod’s crew as charged and influenced but equally able to resist if they were not—as the passage goes on to express—too afraid of Ahab.\(^89\) We see Starbuck’s explicit, distinct desires from the moment he declares: “I came here to hunt whales, not my commander's vengeance” to his final declaration on the third day of the chase: “‘Oh! Ahab,’” It is “‘not too late to desist.’” In fact, we are told directly “that however magnetic his ascendancy in some respects was over Starbuck,” Ahab knew that his “chief mate, in his soul, abhorred his captain's quest,” and “would joyfully disintegrate himself from it.” But as we have seen even Starbuck was “welded” into an “indissoluble league,” exerting a will that was explicitly controlled by Ahab for exactly as long as he “kept his magnet” pointed at his first mate’s brain.\(^90\)

Finally, \textit{Moby-Dick} never portrays anything like “the relationship between the “magnetiser” and a “mesmerized subject.” After all, Ishmael is explicitly a conscious “witness” to his actions, “however ludicrous they must have been.”\(^91\) As I hinted the very fact that he “lives to tell the tale” clearly demonstrates that he was not in a mesmeric trance. And Ishmael could not tell the story of “The Quarter-Deck” if he had not been “perfectly conscious of all that has taken place.” This kind of witnessing—and this level of awareness—is apparent as soon as Ishmael can look back and remember: “my shouts had gone up with all the rest; my oath had been welded with theirs.”\(^92\) And the crew members all clearly knew that Ahab compelled them to hunt the white whale.

\(^{89}\) Melville, \textit{Moby-Dick}, 517-518.
\(^{90}\) Melville, \textit{Moby-Dick}, 163, 568, 212, 166, 212.
\(^{92}\) Melville, \textit{Moby-Dick}, 573, 179.
Electro-biology also offers a stronger account than mesmerism because even the moment of Ishmael’s “sympathetical feeling” ultimately comes up short. After all, before Ishmael ever meets Ahab in “The Ship” he expresses a kind of sympathy that is seems totally unrelated to Ahab’s alleged mesmeric power: “As I walked away, I was full of thoughtfulness; what had been incidentally revealed to me of Captain Ahab, filled me with a certain wild vagueness of painfulness concerning him. And somehow, at the time, I felt a sympathy and a sorrow for him, but for I don’t know what, unless it was the cruel loss of his leg.” He offers similar feelings about Bulkington: “I looked with sympathetic awe and fearfulness upon the man, who in mid-winter just landed from a four years' dangerous voyage, could so unrestingly push off again for still another tempestuous term.” And even in at the moment of Ishmael’s “sympathetical feeling” he felt as if his “oath had been welded” with the others: one of many accounts of Ahab that links him to “metallic hardness” and, potentially, to the power of his magnetism—but not anything like hypnotism. Finally, when Melville does intend to reference mesmerism in Billy Budd he also uses the term directly, describing the way that Claggart looked at Billy “mesmerically” twice.

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This idea of an organism as a Leyden jar is not without precedent. In fact, “the torpedo fish, or electric ray, was the source of much interest on the part of electrical experimenters in the late-eighteenth century, as its ability to shock those who handled it suggested how an animal might

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93 Gilmore even adds that he focuses on Pierre to flesh out the ways that, “the telegraph gave rise to questions about the limits of communication and sympathy.” Gilmore, Aesthetic Materialism, 86

94 Ahab, as Robert Zoellner points out, is repeatedly “associated with metallic hardness.” He paces the Pequod with an “iron brow.” He wears an “Iron Crown” upon a “steel skull.” He stands ‘like an iron statue.” And he has an “iron soul,” a “heart wrought of steel,” and a even a “brass forehead.’” Zoellner sees the conclusion of the scene on the quarter-deck as an example of a kind of “metallic dehumanization,” inextricably linked to the “sustained electromagnetic metaphor” of Ahab as a Leyden jar. That moment casts him as made of iron. Then in the next chapter his soul runs on “iron rails.” Robert Zoellner, The Salt-sea Mastodon: A Reading of Moby-Dick (Berkeley: University of California Press, 1973), 104.

95 Melville, Moby-Dick, 179, 79, 106.

produce electricity, through a kind of natural Leyden jar” within “its own body.” Here Melville was clearly intrigued. In a letter to Hawthorne in 1851 he describes a “torpedo-fish thrill.” In *Israel Potter* he offers “a torpedo eel.” And years later the “torpedo-fish” returns in *Billy Budd*. Its return is also centrally located: it is described in exactly the moment that prompts Billy to kill Claggart, who mesmerized him with a glance like the “hungry lurch of the torpedo-fish.” Melville is clearly considering this creature, which is able to develop and use electricity that is “the same as galvanism”—becoming a kind of living Leyden jar.

There is also scientific precedent for this figuration of humans as a kind of Leyden jar. J.O.N. Rutter, the author of *Human Electricity*, describes Electrical Fish in his appendix for a reason. Harold Aspiz, in turn, frames the torpedo fish as central to “human electricity.” And, finally,

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98 To offer more detail: Melville offers that he thinks he can see how a “man of superior mind” might experience a kind of “spontaneous aristocracy of feeling” to protect against “contact with a social plebian.” Then he compares that experience to an “English Howard,” experiencing a “torpedo-fish thrill.” “You may possibly feel a touch of a shrink, or something of that sort” in response to his “ruthless democracy on all sides,” he tells Hawthorne. But he goes on to describe that spontaneous defensiveness as a “ludicrous” response to aristocratic snobbery. Herman Melville, *Correspondence* (Evanston: Northwestern University Press, 1993).

99 This “torpedo eel” is a relative that was studied alongside the “electric eel.” It was invoked when “Paul,” or John Paul Jones, had just sunk a ship to prevent her from sharing intelligence. In this moment we are told that, “seeming as much to bear the elemental commission of Nature, as the military warrant of Congress, swarthy Paul darted hither and thither; hovering like a thundercloud off the crowded harbors; then, beaten off by an adverse wind, discharging his lightnings on uncompanioned vessels.” In this moment of being like lightning he is also “a torpedo-eel.” Herman Melville, *Israel Potter: His Fifty Years of Exile*, Trade (Evanston: Northwestern University Press, 1998), 96-97.

100 In the moment that “Claggart deliberately advanced” on Billy he looks him in the eye “mesmerically” with eyes “losing human expression.” The “first mesmeric glance,” we are told, “was one of serpent fascination,” but “the last was as the hungry lurch of the torpedo-fish.” Captain Vere attempts to get Billy to speak and to defend himself. But Billy does not respond like Captain Ahab’s crew. Instead the mesmerized “transfixed one,” could only gesture and gurgle” until the accidental murder. In actuality the “torpedo fish” or “Electrical Fish” strikes to defend themselves against attack. So, if anything, the torpedo-fish in this context would be *Billy*, instinctually lashing out. But either way, Melville certainly references a kind of electrical, instinctual, “torpedo fish thrill” that is a part of each fish. Herman Melville, *Billy Budd, Sailor: An Inside Narrative* (Chicago: University of Chicago Press, 1962), 198.

101 Rutter, lxii appendix

102 Rutter, lxii appendix

103 Harold Aspiz, “The ‘Lurch of the Torpedo-Fish,’” 127.
Gershom Huff offers that “our systems are perpetually experiencing a renovation of electric power”—just after an extended comparison between human systems and Leyden jars.104

Benjamin Franklin began to articulate the relationship between Leyden jars and humans in 1749. At least, he explained in his work on “electrical matter” that if a “Leyden Bottle” was touched by a second person it would “pass thro’ him into the common Mass, and return thro’ him, when the inner Surface resumes it’s Quantity,” or equilibrium. Franklin added that if this second person “apply his Finger to the Wire, take the Spark and then withdraw his Finger” until he draws “a Number of Sparks” that he could exhaust the inner foil and leave the outside charged.105

Franklin, like Melville, described electrical matter as “subtle.” For him its parts were immediately and equally diffused through the whole, as if “common matter” were a sponge for electrical fluid. In Franklin's words: “§1. The Electrical Matter consists of Particles extremely subtile, since it can permeate common Matter, even the densest Mettals, with such Ease and Freedom, as not to receive any perceptible Resistance.” And, more importantly, humans were clearly included: “§2. If any one should doubt, whether the Electrical Matter passes thro’ the Substance of Bodies, or only over and along their Surfaces, a Shock from an electrified large Glass Jar, taken thro’ his own Body, will probably convince him.”106

A decade later Joseph Priestly still agreed. In his A Familiar Introduction to the Study of Electricity Priestly offers an entire chapter on “Charging Electric Substances,” which relies on the Leyden jar. And in his discussion of humans Priestly explains that “if part of the human body is made part of the electric circuit”—or if “the fire of the jar” has to pass through him to get from one side to the other—“a violent shock is given.” In fact, the discharge affects the fingers and muscles like a convulsion—a reference to biological galvanism. Finally, Priestly concludes,

104 Gershom Huff, *Electro-Physiology: Scientific, Popular, and Practical Treatise of the Prevention, Causes, and Cure of Disease; or, Electricity as a Curative Agent* (New York: Appleton, 1853), 228.
“if people hold hands” “it will pass through all of them, and they will feel the shock alike.”

Of course these readings only insist that any materials “subjected to the influence of the electricity of the jar” had to be part of its “circuit.” Or as Melville states explicitly when he writes “The Lightning Rod Man”: “man is a good conductor.” The claim that humans are like Leyden jars requires more. Here humans must be able to conduct and to store charge. This is what we see when, for example, an extended comparison between humans and Leyden jars by Gershom Huff discusses atmospheric causes that diminish the “electricity in the system,” as if it can hold charge that does more than “pass through.” Then he adds that observing patients with cholera he noticed “electric fluid which continually discharged itself on the approach of any conducting body to the surface of the skin.” He found that “streams of electricity, many of them averaging one inch and a half in length, could readily be educed by the knuckle of the hand when directed to any part of the body.” And, perhaps not surprisingly, “these appeared, in color, effect, crackling noise, and luminous character, similar to that which we are all accustomed to observe when touching a Leyden jar.”

This certainly helps us contextualize Ahab as a Leyden jar. But by the time Melville was writing these claims reached even further. In 1850 George Stone explained: “the nervous power, or human galvanism, is produced by the action of a natural battery forming part of the system. The battery is composed of the brain and spinal marrow.” The mechanism for this was still unknown, but Stone felt it was “undoubted.” He continued by explaining that the brain “will even produce common galvanism under certain arrangements.” Melville certainly seemed to agree when he noted the seemingly inherent “physical electricalness of Isabel,” who “seemed reciprocal...

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107 Joseph Priestley, A Familiar Introduction to the Study of Electricity, 1769, 42, 55-56.
108 Reid and Bain, Elements of Chemistry and Electricity, 274.
109 Melville, Piazza Tales and Other Prose, 123.
110 Huff, Electro-Physiology, 228, 237.
with the heat-lightnings and the ground-lightnings” in Pierre. And this distinction between holding and storing electricity is what shaped work in a field described as “Human Electricity.”

“Animal Electricity” became a new branch of science after Galvani’s work with frogs, which caused electricity to be imagined as part of the animal economy. But 1854 J.O.N. Rutter pushed much further, asking the question: “what has electricity, as manifested by frogs and other animals, to do with human electricity?” That question shaped his entire book with the same title: Human Electricity. But it has a much longer history that dates back to Melville’s moment. Rutter’s claim was that “the human body is not only a conductor—it is also an electric.” And that means it “can be excited by friction in the same manner as wax, glass, or metal.” “By merely rubbing the hair” of a person who has been “insulated” — or by rubbing them with a piece of fur —“a small Leyden jar, held in contact with his finger, may be sufficiently charged to produce a snap, a spark, and a shock.” This kind of result is no surprise. It was well-known to anyone familiar with the elementary principles of electromagnetism.” But Rutter was interested in learning more about the results with in the human body—or the electricity internal to the body—that allowed it to charge a Leyden jar. Rutter makes an almost identical point one hundred pages later. But here is even more explicit. The difference between being a “conductor” and an “electric” is that a person who is an electric can also “excite electricity” internally.

112 Gilmore, Aesthetic Materialism, 94.

113 Rutter, Human Electricity, 12-14. For more on Galvani’s work to use frogs to test the relationship between electricity and physiological motion—and between animal life and electricity, in general—see Marco Piccolino and Marco Bresadola, Shocking Frogs: Galvani, Volta, and the Electric Origins of Neuroscience (New York: Oxford University Press, 2013), 108-140.

114 Rutter, Human Electricity, 24. Rutter’s book was published in 1854, but the ideas were “in the air” and in print. In fact, to give a few examples, as early as 1850 “Electricity of the Human Frame” received a section in the Annual of Scientific Discovery, information from “Silliman’s Journal” (i.e. the American Journal of Science) circulated widely in 1845, and a lecture on this topic was printed in the New York Dissector in 1848). Annual of Scientific Discovery: Or, Year-book of Facts in Science and Art (Gould, Kendall, and Lincoln, 1850), 114-115; Annual of Scientific Discovery: Or, Year-book of Facts in Science and Art (Gould, Kendall, and Lincoln, 1850), 114-115; Annual of Scientific Discovery: Or, Year-book of Facts in Science and Art (Gould, Kendall, and Lincoln, 1850), 114-115.

115 This is from a chapter titled “The Human Body Electrical.” Rutter, Human Electricity, 38-40

116 Rutter’s related account is that “by causing a person to stand upon a stool with glass legs, and then
In a chapter on “The Human Electrical Current” Rutter begins to develop this account. He explains that in 1851 Du Bois-Reymond was the first person to develop the “muscular (electrical) current in the human body” by imitating the conditions that worked best on frogs. He found that “by forcibly contracting the muscles of one of his arms, whilst the other arm were relaxed and at rest” he was able to “cause a deflection of the needle” each time an arm was thrown into tension. The unlikely “circuit” could be “completed through the operator’s body,” which, “for the occasion,” was “said to represent a (human) battery.” Then he developed a “galvanoscope,” which supposedly proved the existence of an electrical current inside the human body.

From the prefatory pages of Rutter’s Human Electricity.
Image courtesy of the Bakken Museum of Electricity and Life.

rubbing him briskly with a piece of dry fur, a sufficient quantity of electricity may be soon collected from him to charge a Leyden jar,” which could, in turn, “explode gunpowder, inflame spirits of wine, or produce the ordinary phenomena of a snap, a spark, and a shock.” Rutter, Human Electricity, 157.

117 Rutter, Human Electricity, 115
118 Rutter, Human Electricity, 123
These experiments in “human electricity” went beyond just revealing that a human body could *internally* produce a kind of charge that would register on a “galvanoscope” or spark a Leyden jar. Not surprisingly—given the burst of commercial products like “the invigorator” or electrical baths in the next decade—electricity was also directly linked to the “state of health.” Here Rutter explains that for healthy subjects the body was in a state of balanced equilibrium. But with nervous disorders or an “overworked brain” there is more “excitability.” And ultimately “a healthy and vigorous person” is unable to develop “electrical current as freely and forcibly as another with some accidental or constitutional defect.” Their “nerves are more sensitive,” which makes them “more perfect conductors.”

Here we certainly might turn one last time to Captain Ahab, who—following Rutter’s logic—might not be an actual “Leyden jar” but who could certainly hold and then release his own charge, or this “shock of his *electric* power.” Ahab clearly meets Rutter’s criteria for a subject who is likely to produce a charge. He is not healthy. His pacing does not make him vigorous. And he definitely has an “overworked brain.” Rutter continues to offer accounts that seem to match Melville’s most famous character. “Some persons are more susceptible to external influences than others,” he explains. “For example, some are affected by sudden changes in the weather, or the direction, or force, of the wind” or “by an unusual quantity of electricity in the atmosphere” or by “the occurrence of a thunder-storm.” And some are even so “susceptible” that “they know by their sensations, whilst in bed, if the direction of the wind has changed during the night.” These people can also “foretell coming changes of the weather that are not expected,” and “they can indicate the approach of an electrical cloud.”

Ahab’s comparison to a Leyden jar begins in a similar moment, just as “he looked not unlike the weather horizon when a storm is coming up.”

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119 Rutter, *Human Electricity*, 125-126, 156. Also see Rutter’s chapter “Are Health and Disease Affected by Electricity?” Rutter, *Human Electricity*, 156.


And finally, in his very next sentence Rutter adds: “antipathies with respect to certain animals, birds, insects, and reptiles, and which in some instances are mutual… are most likely allied to this class of phenomena.” He continues by explaining that these relationships are more easily accounted for, by reference to their electrical relations, than on any other principal.”

This is circumstantial evidence, of course. But Rutter’s conclusion is ultimately that “man cannot, even if he were to desire it, be an isolated being. He may shut himself up, or wander far away,” but he must “still communicate with the living world.” And this openness is, in its own way, the real lesson of humans as Leyden jars, even if they produce some of their own charge.

When we use this emphasis on openness and permeability to reconsider “Ahab” a very different version of his character comes into focus. Ahab, we see, is shaped and driven by external forces. This is all but explicit in “The Chart,” when “it almost seemed that while he himself was marking out lines and courses on the wrinkled charts, some invisible pencil was also tracing lines and courses upon the deeply marked chart of his forehead.” Perhaps Ahab actually does have a totalizing, universal will that, at the end of the day, writes everything. Or, as this passive construction suggests, the lines that Ahab makes and the lines that he receives each come from the same “place,” or have the same origins. Ishmael selects the second option when he surmises that “subtle agencies” “wrought on Ahab’s texture.” In fact, as with White-Jacket, Ahab finds that the weather affects his body and his “soul”: “all the witcheries of that unwaning weather did not merely lend new spells and potencies to the outward world. Inward they turned upon the soul”

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122 Rutter, Human Electricity, 168.
123 Rutter, Human Electricity, 168.
124 Melville, Moby-Dick, 198, 126. I will have far more to say about Melville’s “souls” in my next chapter, but I would like to note, here, that Melville at least considers a conception of “souls” as “material.”
Here Ahab—quite counterintuitively—is not the pinnacle of selfishness. Instead, he seems quite passive. Yes, “the firm tower, that is Ahab; the volcano, that is Ahab; the courageous, the undaunted, and victorious fowl, that, too, is Ahab; all are Ahab.” But we can read this declaration in two different ways: Everything is Ahab—or everything makes Ahab.\(^{125}\) He is what he encounters—what he gathers, or what clings to him. This second option seems more likely. Ahab is responding, after all, to a magnetizing doubloon that all the characters read differently, according their own backgrounds, interests, investments—or even, “matters of concern.”

Starbuck considers the bible, Stubb the zodiac, Flask sees dollars and cigars—and in Pip’s words, “I look, you look, he looks; we look, ye look, they look.” Meanwhile Ahab—perhaps unexpectedly—shows remarkable self-awareness, offering an account that is the more visible version of Pip’s. Ahab explains, directly, that the gold is like a globe, which “to each and every man in turn but mirrors back his own mysterious self.” Then he goes on to declare that there is “something ever egotistical in mountain-tops and towers, and all other grand and lofty things.” “Look here,” Ahab continues “three peaks as proud as Lucifer.” This is simply not the voice of a self-absorbed villain.\(^{126}\)

As “The Chart” concludes, we find confirmation for this reading—and gain an even deeper sense of Ahab’s passivity. At this point, we learn, Ahab “was no longer an integral.” Instead he is “dissociated” from his “characterizing mind,” and the “formless” “vacated thing” that remains is inextricably linked to both a kind of “common vitality” and a “living principle.”\(^{127}\) It seems appropriate, here, to compare Ahab to the Pequod’s carpenter: “a life-long wanderer” who had “gathered no moss” and who had, instead, “rubbed off whatever small outward clingings might have originally pertained to him.” The carpenter is a “literal” tabula rasa: a blank, a “sort of unintelligence,” even “uncompromisedness,” who worked by a “spontaneous literal process.”

\(^{125}\) Melville, *Moby-Dick*, 431.


Like “a new-born babe; living without premeditated reference to this world or the next,” he is a pure responder. And nothing builds him up against this: intelligence included. To use Melville’s language, he “was a pure manipulator; his brain, if he had ever had one, must have early oozed along into the muscles of his fingers.”

If Ahab were like the carpenter, he would be “an unfractioned integral”: made and completed by various, separable parts, without conflict between his material responsiveness and his “characterizing mind.” We could perform an anatomy on him, or trace his compositional forces. But to do so, he must be “a stript abstract”—a leaf without its stem, a tree divested of its bark, or even something that’s been torn—disconnected from its roots, its network, or its context, always ready to be reproduced or recombined, like print. So if Ahab were actually like the carpenter, then he could be complete: whole, balanced, and unaffected by his surroundings. Nothing would stick to him because he would have no charge. But, of course, I have said “if” for a reason. The exception—as this chapter works to show—is the electrifying whale. Ahab cannot escape the white whale—any more than Ishmael can prevent “the great flood-gates of the wonder-world” that send “endless processions of the whale” floating, “two by two,” into his “inmost soul.” But this attraction to “whales” is about more than Moby-Dick. After all, Melville repeatedly links whales—as the remainder of this chapter will show—to the “wonder-world,” or a realm of invisible but material agencies like electricity in the atmosphere or atoms in a vortex. And these “subtle agencies” will drive both Ahab and his crew.

128 Melville, Moby-Dick, 394, 356-357. This is actually compatible with ways of thinking about “character” at the time. In fact, one of the common notions cited, with regard to autographs in the period, is that “the characters of most men are assumed to ooze out at their finger tips.” As I will discuss in my third chapter, for Melville character is inextricable from its origin in writing—a fiction of personal legibility. Tamara Thornton, Handwriting in America; A Cultural History, (New Haven: Yale UP, 1996), 87.


130 Melville, Moby-Dick, 7.
Atmospheric Electricity

If Ahab is really a kind of Leyden jar who influences his crew with magnetism then we have to ask: what is his “prime conductor?” And what, in turn, is Ahab’s charge, or the “fiery emotion of his own magnetic life”? Because a Leyden Jar is not only about the structure or the charge. It is about the play of elements that constantly surround it, which bring charge or enable discharge. It is, in short, about its atmosphere, meteorological and otherwise.

Ahab’s prime conductor—or the generator or origin of his change—seems to be something like lightning. Of course it manifests itself as magnetism in some moments, but as we read in “The Needle,” “the magnetic energy, as developed in the mariner’s needle,” “is essentially one with the electricity beheld in heaven.” And magnetism is consistently framed as being weaker. After all, one paragraph later Ahab changes the magnetism of a compass needle, declaring himself “lord” of the “lodestone,” which suggests that he is stronger than a derivative magnet. Ahab also calls himself “Old Thunder!” which frames him as a direct result—if not a sort of echo—of lightning. Finally, in a discussion of lightning when Starbuck calls for the crew to put out the lightning rods, Ahab atypically declines, cries out “Avast,” and then offers an otherwise puzzling, uncharacteristic suggestion: “let's have fair play here, though we be the weaker side.”

This suggestion that Ahab’s power was somehow derived—at least in part—by lightning is also suggested by his physical description: with “no sign of common bodily illness about him,” Ahab still “looked like a man cut away from the stake” after being overrun by “fire. That fire had, somehow, “wasted” his limbs “without taking away one particle.” (“Fiery emotion,” indeed). And this appearance of being consumed and then preserved by fire was because of lightning “Threading its way from among his grey hairs, and continuing down one side of his tawny scorched face and neck,” we learn:

131 Melville, Moby-Dick, 516-517, 505
You saw a slender rod-like mark, lividly whitish. It resembled that perpendicular seam sometimes made in the straight, lofty trunk of a great tree, *when the upper lightning tearingly darts down it*, and without wrenching a single twig, peels and grooves out the bark from top to bottom ere running off into the soil, leaving the tree still greenly alive, but branded.\(^{132}\)

Ahab’s scar, we are told, “resembled that perpendicular seam” sometimes made by “lightning,” just like it brands a tree. It seems to run “from crown to sole.” And the remainder of the passage is even more informative. We learn that according to the Manxman Ahab received the scar, or became branded—specifically as if by lightning—when he was forty. And the scar “came upon him, not in the fury of any mortal fray, but in an *elemental* strife at sea.”\(^{133}\) This reading of “elemental strife” in Ahab suggests a kind of chemical recomposition—as does the initial image of lightning “wasting” him “without taking away one particle.” It also harkens back to this chapter’s original comparison between Ahab and White-Jacket, who was made of circulating atoms that were continuously exchanged and then conserved.\(^{134}\) Finally, of course, this reading of Ahab struck by lightning helps explain how a human could serve as a charged Leyden jar.

Ahab directly confirms that he was affected by fire, charge, or lightning. He cries: “Oh! thou clear spirit of clear fire, whom on these seas I as Persian once did worship, till in the sacramental act so burned by thee, that to this hour I bear the scar; I now know thee, thou clear spirit.” Then he acknowledges that he is part of this a *circuit* “Oh, thou clear spirit, of thy fire thou madest me, and like a true child of fire, I breathe it back to thee.” This is followed by a stage direction that signals “sudden, repeated flashes of lightning.” And Ahab calls lightning his “sire” before addressing it: “I burn with thee; would fain be welded with thee.”\(^{135}\)

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\(^{132}\) *Melville, Moby-Dick*, 123.

\(^{133}\) *Melville, Moby-Dick*, 123-124. Here with this reference to “elemental strife at sea” we should also remember the account of Ahab’s monomania: “his torn body and gashed soul bled into one another; and so interfusing, made him mad.” This also seems to be a form of “elemental strife.” *Melville, Moby-Dick*, 185.

\(^{134}\) Again, in *White-Jacket* we meet a protagonist relates to his shipmates by way of “capillary attraction.” who absorbs rain into “his own proper person” “in accordance with the natural laws, and who undergoes a series of phase changes declaring that even his soul is “made up of atoms.” *Melville, White-Jacket*, 4, 392.

\(^{135}\) This passage also suggests that when his men are “wedded” they are not *separated* from him or it.
Here the question, of course, is: what is Ahab’s charge? What is the “fiery emotion of his own magnetic life”? And how does this abstract conceptual idea translate into human experience? The answer, here, is two-fold. First, this idea of “fiery emotion” is a technical reference to work by Benjamin Franklin, which makes this about the conservation or circulation of change, and second, it brings us to Melville’s enduring interest in the connection between humans and the atmosphere, which has palpable effects throughout his fiction.

In 1749 Benjamin Franklin became the first person to make what he called a “battery” for storing charge. He also developed the idea that electricity was a “fluid” that could be positive or negative. This electrical fluid, Franklin explained, was governed by a “conservation of charge.” That means charge was passed along—not created or destroyed. This conceptual work, in many ways, was dependent on the Leyden jar, which Franklin brought to America in 1747. By 1752 Franklin flew his kite—and drew electricity from the sky. Finally, his fourth major contribution to electricity was that Franklin referred to charge as “fire.” In blending his idea of the conservation of charge with the idea that charge is a kind of fire, Franklin developed “an account of electricity in the Leyden jar as a circulating fire” that perpetually “sought” a natural state of equilibrium.  

This idea of electricity as “circulating fire” certainly resonates with the “fiery emotion accumulated” within the Leyden jar of Ahab’s “own magnetic life.” And this comparison of electricity and fire is by no means a one-time reference for Melville. In fact, in midst of a lightning storm Ahab’s path is “made plain to him” quite “suddenly” thanks to “lances of fire.” And throughout *Moby-Dick* and *Pierre* we find references to Franklin’s electric fluid. We learn, for example, that lightning rods are built to “carry off” “perilous fluid.” And by *Pierre* Melville’s engagement with this theory of electricity is explicit. He offers that “Isabel seemed to swim in an electric fluid,” while the shield “of her brow seemed as a magnetic plate.”

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These references to electric fire continue throughout Melville’s fiction, even in ways that reach beyond Ahab. Lightning spotted on the Pequod was described as a “darting flambeaux,” or flaming torch. And this “fire” also references other characters’ interiors. We read, for example, that with Starbuck’s “flashing eyes” and his “fiery cheeks” it was easy to believe that he had “received the blaze” of a musket that was curiously and chemically described as a “levelled tube.” And this reaction is explicitly linked to his “emotion,” which he had to “master.” Melville builds this connection between lightning and the fieriest emotions of life in Pierre, which I will discuss. And after Ahab exclaims that “the white flame but lights the way to the White Whale!” he goes on to describe him as “fire.” Finally we learn, at the conclusion of “The Needle,” that Ahab has “fiery eyes” to match his “fiery emotion.”

Unfortunately this engagement with electric fluid is not as simple as it seems. Melville also offers a multitude of moments that engage with developments in electromagnetism after Henry and Faraday’s transformative development of induction. In addition to Ahab’s “magnetic ascendency,” for example, discussion of Ahab as a Leyden jar points to “his own magnetic life.” That passage begins with the fact that his question had somehow “magnetically thrown” his crew. And as I’ve described repeatedly throughout this chapter, magnetism is linked to Ahab throughout Moby-Dick, from the moment he points his magnet at Starbuck’s brain to his position as “lord of the lodestone” or his description of the ever-alluring Moby Dick as “all magnet.”

This aspect of Melville’s account is not drawn from Benjamin Franklin. In fact, by the time electromagnetism was imagined the idea of electric “fire” was long gone. Of course Franklin did make the comparison between lightning, electricity, and fire that Melville draws from when he famously captured lightning from the sky. But instead of replacing Franklin, Melville simply adds to his work by making magnetism part of the same chain.

138 Melville, Moby-Dick, 505, 474, 507, 519.
139 Melville, Moby-Dick, 212, 517, 340.
Electromagnetism is a major force in *Moby-Dick* long before we meet Ahab or read about this Leyden jar. Melville hints that the crew may “naturally” be “in the Electro-Psychological state” as early as the second paragraph of “Loomings” when Ishmael recasts New York’s “battery.” “The streets take you waterward,” he tells us, as if the people he describes are pulled along. “Its extreme downtown is the battery,” he continues, adding “look at the crowds of water-gazers there.” Then finally, after describing “thousands upon thousands of mortal men fixed in ocean reveries,” he offers an hypothesis: “Tell me, does the magnetic virtue of the needles of the compasses of all those ships attract them thither?” This is an unexpected way to begin a novel—even a text that is permeated with electromagnetic references until its final vortex.

Even seemingly innocuous moments come back to suggest that Melville imagines the crew as inextricably connected to electricity. For example, when several boats plunge lines into one whale that stirs as they “vibrated in the water, distinctly conducting upwards to them, as by magnetic wires, the life and death throbs of the whale.” This moment actually suggests that the group of men in whaleboats become a kind of battery: an invention developed when Benjamin Franklin connected Leyden jars with “conducting wires” that stored enough charge to move “powerful machines.” And finally, in a way even Halliday agrees. “It is significant,” he explains, that Ahab describes Moby Dick as “all magnet” and that Ahab is a “Leyden jar.” In fact, in the midst of his book on electricity Halliday argues that “Ahab’s entire career in the novel” is “‘attended by electric’ (and, we might add, magnetic) ‘phenomena.’” This use of the word “attended”—as if electricity were supervisory—shifts Captain Ahab’s agency in a telling way.

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141 I discuss this vortex in detail in the section of this chapter titled “Three Ways of Looking at a Vortex.” Melville, *Moby-Dick*, 572.
144 Halliday, *Thinking and Writing Electricity*, 110.
This chain from lightning to electricity to fire—and, finally, to magnetism—raises a question. Why does Melville choose to draw on Franklin’s model of electricity and fire, which is the piece that didn’t fit his own contemporary models? And the answer, I think, is that he wants both the dramatic image of fire and the conceptual work of Franklin’s model of circulation, or the idea of the conservation of charge.

This model of circulation of charge between humans and the atmosphere extends beyond Ahab’s interactions with lightning and magnets to an even smaller scale: atmospheric electricity. This becomes even more explicit in Pierre when meteorology and “atmosphere” become central. Early on, Pierre declares to Lucy: “I cannot think, that in this most mild and dulcet air, the invisible agencies are plotting treasons against our loves.” But sadly for Pierre he turns out to be wrong. And his resistance to the pull of invisible agencies doesn’t last ten pages. Pierre starts to think obsessively about “the face” that turns out to be Isabel’s. Her face “insistently” and “magnetically” affected him, seeming “to have taken hold of the deepest roots and subtlest fibers of his being.” In Pierre’s own words, “it was mostly the face”—Isabel’s face—that somehow “wrought upon him”—which certainly sounds like Ahab’s response to his white whale.

This move to connect “love,” “air,” and “invisible agencies” continues as Pierre develops. The “Three Weird Ones” who “tend Life’s loom,” for example, created their pre-Socratic and pre-Christian world by weaving threads that “unerringly conduct electric presentiments.” Pierre’s memory can be unlocked only with a “chemic key.” And “the blue eye of woman, like the sea, is not uninfluenced by the atmosphere.” But the pinnacle of Pierre’s acknowledgment that his emotions are constantly and powerfully affected by “invisible agencies” in the atmosphere arrives in his book’s fourth chapter, “Retrospective,” which begins:

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145 As I discuss in my next chapter, Melville repeatedly seems more committed to his conceptual vision than to teleology, even when he is very aware that his references are outdated.

146 Melville, Pierre, 27, 48-49.

147 Melville, Pierre, 70.

148 Melville, Pierre, 70, 35.
In their precise tracings-out and *subtle causations*, the strongest and *fieriest emotions of life* defy all analytical insight. We see the cloud, and feel its bolt; but meteorology only idly essays a critical scrutiny as to how that cloud became charged, and how this bolt so stuns. The metaphysical writers confess, that the most impressive, sudden, and overwhelming event, as well as the minutest, is but the product of an infinite series of infinitely involved and untraceable foregoing occurrences.*Just so with every motion of the heart.* Why this cheek kindles with a noble enthusiasm; why that lip curls in scorn; these are things not wholly imputable to the immediate apparent cause, which is only one link in the chain; but to a long line of dependencies whose further part is *lost in the mid-regions of the impalpable air.*

This passage offers a familiar account in our current intellectual climate: events are complex productions with histories too rich to reproduce in full. As Melville explains, things are never “wholly imputable to the immediate apparent cause, which is only one link in the chain.” But the thing that is absolutely striking is that here Melville does not throw up his hands. Instead he suggests that *every event* should ultimately be credited to “a long line of dependencies whose further part,” it turn out, is currently “lost in the mid-regions of the impalpable air.”

This account is generally read as being about *causation*. Geoffrey Sanborn, for example, draws on it to strengthen a claim about the impossibility of establishing “the origin and significance of every ‘visible impress,’” describing this moment as a “meditation on causation.”

And Maurice Lee reminds us that “Melville repeatedly returns to an etiological question: why does Pierre feel and thus act as he does?” “Herein,” he tells us, “lies the central ambiguity of a book that doggedly seeks but does not find the master cause that drives Pierre”—a search that leads Lee to Jonathan Edwards’ *The Freedom of the Will*, which explains that every action lies “in the whole infinite chain a necessary effect.”

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151 Maurice S. Lee, *Uncertain Chances: Science, Skepticism, and Belief in Nineteenth-Century American Literature* (New York: Oxford University Press, 2011), 73. I discuss Edwards’ *The Freedom of the Will* as a likely source for Melville near the end of this chapter when I situate Melville’s resistance to Lucretius’ idea of the swerve in terms of his insistence—especially in “The Mat-Maker”—that we do what we “will” only because we “choose” what we happen to do. In short, Melville’s compatibilism—or his belief that “free will” and “determinism” do not have to contradict each other—is derived from Edwards.
Unfortunately these discussions of “fate” do not seem to lead scholars towards a discussion of fate’s materialist mechanism. Paul Gilmore and Samuel Otter are the only critics to push beyond addressing this moment as either a metaphysical meditation on causation or an occasion for tracing Melville’s sources. Instead Gilmore and Otter acknowledge Melville’s electrical content—along with the ways that here Melville materializes the emotions. Gilmore explains that “Melville returns to electricity to elucidate a kind of ‘indefiniteness,’” and here he also turns to the way Melville draws on “electrical imagery” to suggest that “electrical connections” are “unpredictable.” But while he shares this interest in failed causal accounts with other critics, Gilmore reaches past the ways that Melville echoes Byron and Shelley by actually following his “meteorological analogy.” Here Gilmore finds that Melville’s narrator “indicates that the causes and effects of” even “emotional reactions are physical,” going so far as to suggest that for Melville it is only their “indefiniteness makes them seem nearly spiritual, ‘impalpable.’” In short: for Melville even the emotions are material.

Sam Otter pushes even further. After acknowledging Melville’s comparison between meteorology and emotions he describes its centrality for this remarkable textual moment. “Between the intention and the act in Pierre,” Otter tells us, “falls the shadow of the feelings.” And for him this passage shows us that the “world is charged with feeling, as Melville makes vivid in his repeated electrical analogies.” So when Pierre’s heart is “charged to overflowing” or Isabel is “charged” with “immense longings,” the two are somehow bound by a sort of automatic “physical electricness.” Here Otter seems to be thinking literally about electricity’s effect on these representations of humans. Then he describes Melville “embark[ing] on the complex” and “infinite task of attempting to analyze” not causation but “the motions of the heart.”

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152 Gilmore turns to Byron and Shelley, Paul Grimstad to Sir Thomas Browne, and an evasive turn from Melville’s language to his sources is common in readings of this passage. Gilmore, *Aesthetic Materialism*, 96; Paul Grimstad, *Experience and Experimental Writing* (New York: Oxford University Press, 2013), 70.
This phrase—“just so with every motion of the heart”—is not impressionistic or a sign of Melville’s overwrought prose or “sentimental mannerism.” Instead it is a way of describing a heartbeat driven by the spinal cord. Here Melville’s treatment of human and nonhuman events is atypically symmetrical. And in case we have any doubts that he really does mean to include every event, he explicitly moves from “the most impressive, sudden, and overwhelming event” to the “minutest”—or from catastrophe of being struck by lightning to the lip curling in scorn.

Clearly it’s possible to imagine that Melville’s claim is that lightning bolts are only like the motion of the heart—both of which charge in untraceable ways. But this metaphor still wouldn’t mean we are not also dealing with the kind of continuum, which Melville very clearly builds. Why not take him at face value when he offers, directly, that when “the cheek kindles” with “enthusiasm” or the “lip curls in scorn” these are exactly the events whose “further part” is explicitly “lost in the mid-regions of the impalpable air”? Ultimately Melville’s account of meteorology is too detailed and extended to only be a figurative way to say we come up empty-handed. All that is solid may melt into the air, but in the mid-nineteenth century that makes it impalpable, not absent. My claim, conversely, is that there is something very literal at the root of these analogies and metaphors—that these impalpable “materials” and subtle causations or agencies are at Melville’s humans’ very base. These humans are perpetually permeated by the “subtile causations” and “subtle agencies” that atomically reform and electrically recharge them. And this is exactly the conceit of work on “atmospheric electricity.”

155 Paul Grimstad argues that Melville turns to “a voice arising from a fusion of sentimental mannerism and involuted Brownean rhetoric,” which he contextualizes in terms of Melville’s reading and his syntax. Grimstad describes Melville’s move to layer the confessions of “metaphysical writers” with “meditation upon the vicissitudes of the ‘heart’” as a sign of parody, instead of addressing Melville’s content. Paul Grimstad, Experience and Experimental Writing (New York: Oxford University Press, 2013), 70.

156 Here see, for example, William Harvey and Robert Willis, The Works of William Harvey (London: Sydenham Society, 1847), 21-23; Emanuel Swedenborg, The Economy of the Animal Kingdom, Considered Anatomically, Physically, and Philosophically (Boston: Otis Clapp, School Street, 1846), 403-404.

157 Charles Lyell’s transformative Uniformitarian Theory argues that changes in the structure and sculpture of the earth’s crust happen gradually instead of catastrophically. In short: the earth has always been in a kind of continuous state of imperceptibly slow material oscillation and accrual. Elizabeth Foster, “Melville and Geology,” American Literature 17, no. 1 (March 1, 1945), 53.
In 1753 “the subject of atmospheric electricity engaged the attention of persons devoted to physical science in different parts of Europe.” Their interest was derived from Benjamin Franklin’s “Philadelphia experiments,” which quickly continued in England. There Canton “showed that clouds were also electrified.” Then Beccaria pushed Franklin’s work with kites and lightning rods even further, raising them to various heights to show “the electricity of different atmospheric strata."\(^{158}\) This work developed quickly, and by 1830 John Murray offered an especially helpful account of the degree to which understanding meteorology was seen as inextricable from understanding electrical dynamics:

We properly consider that the whole host of meteorological phenomena is connected with electrical principles or modified by them.—The dew that bathes the verdant carpet of the ground, and flickers in rainbow imagery in the morning beam,—the modification of the cloud from the cirrus to the nimbus and that nimbus charged with lighting and tempest—deluging the plain or pelting the earth with hailstones of fragments of ice; together with the meteors that flit and reel through the heavens, or traverse their surface in luminous lines; or curtained in the sky, fan the air with films of diluted light.

Events that range from dew on “verdant carpet” to lightning and meteors, Murray tells us, are all shaped by electricity.\(^{159}\) And by the time Melville was writing C.F. Peschel and others added that “electricity liberated by various processes accumulates” in a kind of “shell of air and vapor, which we call the atmosphere.” That shell was imagined as a kind of “great reservoir” that held the majority of the electricity that exists, while the rest intermittently cycled through the earth. But for Peschel this increasingly important realm of the “atmosphere” or holding tank above us was the place where electricity was “displayed on a large scale.”\(^{160}\)

Work to locate, test, and measure this atmospheric electricity developed rapidly, in and beyond laboratories. As early as 1830 “Aërial electroscopes” had been developed specifically to


\(^{159}\) John Murray, *A Treatise on Atmospherical Electricity* (London: Whittaker, Treacher, & Arnot, 1830), 17

determine the “kind and quality” of atmospheric electricity. They worked differently from regular electrometers by using caps to capture air—along with several layers of intense insulation. But Peschel offered as late as 1846 that “the existence of sensible electricity in the atmosphere” could “be readily proved by fixing a glass tube on a wooden stick” or a “fishing rod” before fastening “a pointed piece of brass or copper wire.” “Erect this in the air,” he explained, “and it will act as an insulated conductor to attract the electricity.” Then connecting that wire to “a delicate electrometer” would reveal “the electricity conducted to it by the atmosphere.” Peschel’s introduction was written in 1846, but it was clearly designed in the tradition of Franklin and many eighteenth-century scientists, who aimed to make their work reproducible. After all, atmospheric electricity directly influenced lives in countless ways.

Atmospheric Electricity was often seen as precarious, largely thanks to dangers inherent in atypical meteorological conditions and phenomena. We learn, for example, that “in repeating experiments on atmospheric electricity considerable caution will be necessary, especially during a thunderstorm.” In fact, if the skin begins to feel like “cobwebs,” then a kite should be abandoned quickly. (The experiment had killed at least one professor, on “incautiously invited the lightning collected by a kite into his house”). Atmospheric electricity also included less common, misleading meteorological phenomena like St. Elmo’s Fire and the Aurora Borealis, which was thought of as a “slow discharge of the atmospheric electricity.” Finally, but not surprisingly, atmospheric electricity was seen as deeply connected to storms. We read, for example, in Lardner’s “popular lecture” on the topic that “attempts were also made to explain on electrical principles other meteorological effects; such as waterspouts, whirlwinds, rain, fogs, hail, &c.”

164 Lardner, *Popular Lectures on Science and Art*, 137. I will return to this topic in my next section, which describes “Three Ways of Looking at a Vortex.”
The Nautical Magazine also offered a detailed account of atmospheric electricity in 1841. Perhaps not surprisingly it focused on storms, explaining that electric masses, like galvanic currents, make “spiral” motions around conductors while they progress—again, like electricity—from right to left. This is, the author explains, “a curious coincidence with the similar motions of hurricanes, whirlwinds, and water-spouts.” Next the author imagined an experiment that would serve as a “way of ascertaining the species of electricity that strikes a ship.” And he explains that “no vessel fitted with Harris’ conductor” had ever been struck with lightning, so his inference was that the conductor could “carry off the atmospheric electricity slowly and silently”—an objective that could easily save lives.165

Last but certainly not least, “the electric character of the atmosphere” was also a topic of “intense interest” for even more direct instrumental concerns about human life. Murray offered, for example, that “the electric state of the air, as affected by moisture” could lead to “the true solution” for diseases like malaria.166 And Rutter, the author of Human Electricity, went so far as to link electricity and emotion. For him “the living organism is a source of electricity; that it is generated within the body, and is, therefore, a condition essential to healthful action among its several parts; its proper development being more closely bound up with our sensations and emotions, than ever we may have suspected, or been willing to believe.” In fact, Rutter argues—like Melville in Pierre—“every movement, look, or gesture; every sensation of pain or pleasure; every emotion, however transient; and, perhaps, every thought unexpressed or word uttered, is, most assuredly, accompanied by the disturbance of electromotive forces.”167

165 The Nautical Magazine also offers an account of the work to reverse the poles of a compass on a ship. It offers: “In vessels struck by lightning, the various steel articles on board have not only been frequently magnetized, but the compass poles reversed, in one, even the compass being made to point east and west. This latter could only have been caused by a transference of the magnetism from the ends to the sides of the needle.” “Compass Deflection,” The Nautical Magazine: A Journal of Papers on Subjects Connected with Maritime Affairs, 1841, 344-345

166 Murray, A Treatise on Atmospherical Electricity, 18.

167 Rutter, Human Electricity, 46, 154.
Here we might turn back, one last time, to Melville’s account of subtle and overwhelming events all being part of “a long line of dependencies whose further part is *lost in the mid-regions of the impalpable air.*” Work on lightning rods was clearly central for Melville’s “The Lightning-Rod Man,” but the idea that drives the text—that “man is a good conductor”\(^{168}\)—also seems relevant in *Pierre* with the leap from the way that a “bolt so stuns” to the “cheek” it “kindles,” which brings us back to fire. The idea of a charged atmosphere clearly informed Melville’s reference to how a “cloud became charged,” and the very idea of “impalpable air” as a substance was a relatively new idea developed by Joseph Priestly three decades before Melville’s writing.\(^{169}\)

The Aurora Borealis and St. Elmo’s Fire also appear in dramatic and informative ways in Melville’s work, where atmospheric phenomenon set the stage for the narrative of *Moby-Dick* in its first chapter “Loomings.”\(^{170}\) And despite all of this, the most powerful link, here, is the one we see with Rutter, which draws out that Melville was not only engaging in some sort of artistic license when he imagined—as Gilmore and Otter identify—that “subtile causations” like electromagnetic charge consistently and imperceptibly shape the “fiery” “emotions of life.”

As “Retrospective” concludes, we learn, from Melville, that “in mature life, the world overlays and *varnishes* us.” It coats us, like when Pierre finds Plinlimmon’s pamphlet in the lining of his jacket, “soft and worn almost to *tissue*” “so that all the time he was hunting for this pamphlet, he himself was *wearing* the pamphlet”—its text becoming part of “his” alleged texture.

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\(^{168}\) I wanted to discuss “The Lightning-Rod Man,” and—to borrow Melville’s turn of phrase—in this document’s “sequel” I will.

\(^{169}\) It’s easy to forget this, but “air” was still a relatively new discovery or technology in the 1850s, less than a century after Antoine Lavoisier and Joseph Priestley. First Priestly discovered what we now think of as the carbon cycle in 1771. Then Lavoisier worked out the existence of pure air, or oxygen between 1777 and 1789. For a detailed account of these developments see Steven Johnson, *The Invention of Air: A Story Of Science, Faith, Revolution, And The Birth Of America* (New York: Penguin, 2008).

\(^{170}\) Melville cites “corpusants,” or St. Elmo’s Fire in *Moby-Dick* just before Ahab describes fire as his “sire.” He writes a poem titled “Aurora Borealis” as one of his *Battle-Pieces.* And, of course, “Loomings,” the title of *Moby-Dick*’s first chapter, is a reference to both weaving and an atmospheric phenomena that lets an observer see what is generally below the horizon. The text ends, in turn, with the “sidelong fading phantom” of the *Pequod,* “as in the gaseous Fata Morgana.” Melville, *Moby-Dick,* 505-506, 3, 572. Melville, *Published Poems,* 111.
The end of this chapter presents us with an ever-shifting iteration of “Pierre” standing before the portrait of his father, “unconsciously throwing himself open to all those ineffable hints and ambiguities, and undefined half-suggestions, which now and then people the soul’s atmosphere, as thickly as in a soft, steady snow-storm, the snow-flakes people the air.” Words can “people.” The soul has an atmosphere. And the thickness of whatever builds up uniformly—snow or lava—clearly makes a difference.\textsuperscript{171}

This passage also indicates that momentary feelings roll down Pierre’s soul like “melted lava.” And those feelings, like lava, leave “deep deposits” in his curiously identified “soil,” framing him as a product of exactly this kind of imperceptible material exchange or conservation. This description becomes so detailed that eventually we learn that Pierre’s reveries never seem to leave any “conscious sediment in his mind.” Instead “they were so light and so rapid, that they rolled their own alluvial along; and seemed to leave all Pierre's thought-channels as clean and dry as though never any alluvial stream had rolled there at all.” And “as though” seems to be the operative phrase in this account. The idea, in short, is that until they reach a critical mass these light, rapid, thoughts—like snowflakes—are imperceptible. This certainly returns us to the moment when Pierre starts to think obsessively about “the face” that turns out to be Isabel’s, which both “magnetically” affected him and seemed “to have taken hold of the deepest roots and subtlest fibers of his being.” It “wrought upon him” just like Ahab’s “subtle agencies,” specifically related to the “weather,” “wrought on Ahab’s texture.”\textsuperscript{172}

What I ultimately take from this chapter is that “Just so with every motion of the heart” is by no means a “just-so story.” Instead, to draw on the first words of the chapter, this is a \textit{tracing} that considers and embraces subtle, imperceptible causations. We can’t trace these chains back to “originals” of any sort. But deposits build—however slowly—and eventually they lead us not to archaeology, or the excavation of depths, but to geology and a series of varnishes or surfaces.

\textsuperscript{171} Melville, \textit{Pierre}, 83, 294, 84.
In Melville’s words:

Far as any geologist has yet gone down into the world, it is found to consist of nothing but surface stratified on surface. To its axis, the world being nothing but superinduced superficies. By vast pains we mine into the pyramid; by horrible gropings we come to the central room; with joy we espy the sarcophagus; but we lift the lid—and no body is there!—appallingly vacant as vast is the soul of a man!173

The “soul” is somehow vacant and vast—empty and expansive—which is, in many ways, the topic of my second chapter. But this apparent paradox resolves when we consider Pierre’s declaration that “corporations have no souls” and that—like Lucretius’ powerful alternative—the way to “reverse the decree of death” is to “Let all die, and mix again!”174 Incorporations or collective entities made by connected material components have an infinite number of possible connections when they aren’t bound by contracts. And so—with charge and atoms—their parts are conserved when they circulate.175 Nature, Melville tells us—still drawing on Lucretius—is the “mere supplier” of a “cunning alphabet” that each “man” combines.176

174 Melville, Pierre, 198.
175 This logic of perpetual circulation and combination is also part of the logic of Electrical Psychology. In fact, H.G. Darling explains that “if we turn to man, and investigate the secret stirrings of his nature, we shall find that he is but an epitome of the universe. The chemical properties of all the various substances in existence, and in the most exact proportions, are congregated and concentrated in him, and form and constitute the very elements of his being. In the composition of his body are involved all the mineral and vegetable substances of the globe.” Darling, Electrical-Psychology, 25. Our bodies, put another way, “are made of the water, the vegetables, and animals upon which we subsist.” And, more importantly, they are continually wasting away, and by food and drink are continually repaired.” We are, in short, in circulation. In fact, Darling imagines that “we lose the fleshy particles of our bodies about once a-year, and the bones in about seven years. Hence in seven years we have possessed seven bodies of flesh and blood, and one frame of bones. We have not now, in all probability, a particle of flesh and bones we had seven years ago.” Instead we are “the water we have drank,” along with the “flesh and vegetables we have eaten.” We stay similar only because we “hanker and long for the same substances of which our bodies are composed.” “This,” Darling tells us, “is habitude.” Darling, Electrical-Psychology, 60. “Man is an epitome of the universe,” and “the chemical properties of all the various substances in existence are congregated in him, and form and constitute the very elements of his being.” Darling, Electrical-Psychology, 95-96.
176 Melville, Pierre, 342. As with the doubloon in Moby-Dick, here we find that “selecting and combining as he pleases, each man reads his own peculiar lesson according to his own peculiar mind and mood.” For a detailed account of the relationships between atoms, or the “seeds of things” and letters in Lucretius see Gerard Passannante, The Lucretian Renaissance: Philology and the Afterlife of Tradition (Chicago: University Of Chicago Press, 2011).
Three Ways of Looking at a Vortex

In “The Mast-Head,” Ishmael tells us that captains are sometimes forced to take “absent-minded young philosophers to task” for not even trying to spot whales. “Lulled into such an opium-like listlessness of vacant, unconscious reverie is this absent-minded youth by the blending cadence of waves with thoughts, that at last he loses his identity.” But, Ishmael reminds us, here’s the rub: “move your foot or hand an inch; slip your hold at all; and your identity comes back in horror.” Put bluntly: zone out, and you might drown. But Melville’s description, here, gives even more away: “Over Descartian vortices you hover” such that you might not rise again.177

Readers are understandably inclined to read this in terms of dualism—or as a reference to Descartes’ famous division of extended matter and some kind of mental stuff. But it’s important to realize that Descartes’ physics centers around the idea of the vortex, along with a concomitant impact model of matter. These vortices are shaped by mutual causal contact within a continuous field of interconnected interactions.178 Tyrus Hillway, the founder of the Melville Society, and Merton Seals, who has carefully charted Melville’s reading, both compellingly claim that Melville’s scientific references are drawn largely from other sources. One clear favorite was Ephraim Chambers’ Cyclopaedia; or, An Universal Dictionary of Arts and Sciences, which was given to Melville in 1846.179 In it, under “VORTEX,” Melville would have found that a vortex, in Cartesian philosophy, is a “System or Collection of Particles of Matter moving the same way, and round the same Axis.” This transpires in a plenum, completely filled with matter in motion. And

177 Melville, Moby-Dick, 136.
178 To be more precise: these vortices are the shape of a sea of fluid matter that makes Descartes’ corpuscular and mechanistic model possible. René Descartes and Stephen Gaukroger, The World and Other Writings (Cambridge University Press 1998), vii.
it is actually two motions: each part revolves around a local system—these are vortices or eddies—and each system, in turn, revolves around a common center.\textsuperscript{180}

\begin{center}
\textbf{The definition of “Vortex” that Melville would have found in Chambers’ \textit{Cyclopaedia}.}
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paradigm,” frustrated and “ceaselessly spinning about without any hope of a final goal, a final rest, or a final meaning.”182 And his claim doesn’t explain why Ishmael is now the center of everything, even over the sun. But the larger issue, here, is that this reading—Ishmael as the center of the “horror” of circular motion—doesn’t leave space for Melville’s fascination with generativity, or with what these material changes can make. (It is, we should notice, also a “creamy pool”). In fact, if we turn to Melville’s language, we find:

So, floating on the margin of the ensuing scene, and in full sight of it, when the half-spent suction of the sunk ship reached me, I was then, but slowly, drawn towards the closing vortex. When I reached it, it had subsided to a creamy pool. Round and round, then, and ever contracting towards the button-like black bubble at the axis of that slowly wheeling circle, like another Ixion I did revolve.183

There’s something fascinating about this vortex, once we shift our focus from Melville’s narrator, who describes himself as being on the margin. We don’t see the crew die; we just see circulation, which he describes as “intermixing.” Everything is carried, specifically as “chips,” until it is all “out of sight.”184 Melville certainly seems to support this more positive (or, at least, value-neutral) reading. In fact—as I just discussed—the protagonist of his next novel, Pierre, offers that the way to “reverse the decree of death” is to “Let all die, and mix again!”185 Here we might turn to historian John Sutton’s compressed description of Descartes’ “physics of circulation, displacement, and endless motion.” But in a world after both Darwin and the development of chemistry, instead of being “hopeless” this “displacement” is the cause of “creation.”186


183 Melville, Moby-Dick, 427.

184 Melville, Moby-Dick, 426.

185 Melville, Pierre, 198.

186 John Sutton, Philosophy and Memory Traces: Descartes to Connectionism (Cambridge University Press, 1998), 86.
This model, which we might consider “process metaphysics” or “fluid ontology,” is arguably as old as Democritus. But it was developed by Lucretius, whose work was clearly an inspiration to Melville. Lucretius famously proposes “minute corpuscles” or “atoms” that are “imperceptible to our senses” and “the origin of things.” For him “various connexions of elements unite together” “until some force of sufficient strength be found to assail them.” And these forces act by working on their “textures.” Then, instead of perishing, “things” dissolve back into these first principles of matter, or the so-called “seeds of things.” Ultimately we find that “production” is always “furthered by the death of another.” And this model of circulation is also—at least in a prominent 1851 translation—linked to a “whirling” “writhing” windy “vortex.”

This theory of a kind of perpetual material circulation of atoms was also still alive and well in Melville’s moment. Schelling offered a remarkably similar philosophy of nature, which aimed to overcome the alleged separation between mind and matter. He described every “organism” and “product of nature” in terms of “constantly transforming” whirlpools:

> A stream flows in a straight line forward as long as it encounters no resistance. Where there is resistance—a whirlpool forms. *Every original product of nature is such a whirlpool, every organism.* The whirlpool is not something immobilized, it is rather something *constantly transforming*—but reproduced anew at each moment. Thus no product of nature is fixed, but is *reproduced at each instant.*

This is the kind of model that Melville seems to engage with when he imagines constant but impalpable exchanges. And by 1858, Helmholtz and Lord Kelvin proposed “laws of vortex motion”

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188 In a translator’s note, Watson offers: “by these words the Greeks meant a hurricane, or perhaps sometimes the wind that produces a water-spout. It is apparent therefore that Lucretius means a fiery wind or hurricane, but I have thought it better to retain vortex in the English.” I will return to this comparison. Titus Lucretius Carus, *On the Nature of Things*, trans. Rev. John Selby Watson (London: Henry G. Bohn, 1851), 15, 256-257.

and “vortex atoms,” which became the near-obligatory starting point for work on dynamics. In short: from his “Descartian vorticies” [sic] to “Let all die, and mix again!” Melville seems to be part of a rich tradition of work that deals with fluid models of perpetual motion.

Branka Arsić pushes even further, drawing not on Descartes’ physics but on his Meteorology, where he describes an atmosphere or plenum full of “subtle matter.” There one kind of vortex is a heavy cloud, which has swept up the other clouds around it. These clouds fall, and that’s what prompts a whirlpool. Here Arsić brilliantly finds Melville converting a meteorological problem into ontological problem: the existence of an object that somehow has no object. And with this account, Arsić suggests, we might even begin to consider Melville’s “persons” in terms of clouds—complete with ever-shifting borders. This is an incredibly helpful reading. But here—as in my reading of Pierre—I want to resist Arsić’s ultimate claim that Melville replaces Descartes’ “bodies” with “thought” to compose a “meteorology of thinking.” Instead it seems important to note that here we simply don’t find a reason to force Melville’s comparison to work as metaphor. Instead we can actually imagine Melville’s “humans” as “an endless circulation”—perhaps of “atoms” or, perhaps, of Arsić’s “vapors and exhalations” like clouds.

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This model of dynamic or perpetual circulation may have originated with Lucretius. But it also seems directly linked to Thomas Beale, whose work Melville clearly cites. On his forty-fifth page, in a chapter on “Breathing,” surgeon and natural historian Beale explains that when a whale is “disturbed or alarmed” by a boat, he “plunges” under water. That’s no surprise, but Beale’s addition is: instead of assuming his normal “perpendicular position,” when startled he sinks

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190 For example, a book on “vortex dynamics” begins: “The motion of a vortex ring is a venerable problem, and, since the attempts of Helmholtz and Kelvin in the last century, extensive study has been made on various dynamical aspects. J. C. Vassilicos and J. C. R. Hunt, Turbulence Structure and Vortex Dynamics (Cambridge University Press, 2000), 1.

191 Branka Arsić, Passive Constitutions, or, 7 1/2 Times Bartleby (Stanford University Press, 2007), 156-157, along with the remainder of “Chapter ½” on “Bartleby or the Cloud,” which explains: “every phenomenon comes about through different forces or intensities of attractions and repulsions of vapors. This means that none of them has any substantial form by is always a process, the temporary contour of a possible form.”
suddenly in the horizontal position… leaving a sort of vortex, or whirlpool” behind. Next the startled whale surfaces specifically not to attack but to “finish his full number of respirations.”

Thanks to the fabulous digital humanities project, Melville’s Marginalia, we can all see Melville’s annotated copy of Beale’s book. He writes at the bottom of this page on “Breathing”:

“white and green vortex in the blue—and when a ship sinks.”

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Melville’s copy of Thomas Beale’s The Natural History of the Sperm Whale
Courtesy of Houghton Library (If they’ll let me use it…)

Beale’s work seems to have been a direct inspiration. He tells readers the story of a whale that avoided an attacking harpooner by descending and leaving nothing behind “but a white-and-green-looking vortex in the disturbed blue ocean, to mark the spot” where he had floated. 193

Melville’s work follows Beale’s account in a number of ways that also integrate the logic of generativity that we encountered with Descartes. On the first day of the chase Moby Dick makes “ever-contracting circles” with horizontal motion. On the second he modified his “direction as he struck the surface,” which caused another “creamy pool.” And on the third the “circling surface creamed like new milk” when his trunk struck “obliquely.” This moment in Beale’s work clearly caught Melville’s attention, and when we turn to Melville’s final scenes, we don’t find a whale that’s malicious. Instead the white whale “booms his entire bulk into the pure element of air.” 194

The title of Beale’s frontispiece points to this idea that Moby Dick is not malicious. Image courtesy of the Cullman Library. Smithsonian Institution Libraries. 195

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193 Herman Melville, “Melville’s Marginalia in Thomas Beale’s The Natural History of the Sperm Whale,” Melville’s Marginalia Online. Ed. Steven Olsen-Smith, Peter Norberg, and Dennis C. Marnon; Beale, Natural History of the Sperm Whale, 180-81; For a remarkably thorough comparison of these moments, see Steven Olsen-Smith, “Herman Melville’s Copy of Thomas Beale’s The Natural History of the Sperm Whale and the Composition of Moby-Dick,” Harvard Library Bulletin 21, no. 3 (2010): 1-77.

194 Melville, Moby-Dick, 411, 417, 422, 415.

195 Beale’s cover page references “ships, boats, men, and instruments used in the attack.” Beale also describes whalers “destroying their unoffending victim.” Thomas Beale, The Natural History of the Sperm Whale, 161.
Melville is very serious about how whales breathe. For example, in “The Battering Ram” he explains: “Those mystical lung-celled honeycombs there may possibly have some hitherto unknown and unsuspected connexion with the outer air, so as to be susceptible to atmospheric distension and contraction. If this be so, fancy the irresistibleness of that might, to which the most impalpable and destructive of all elements contributes.” Here we have yet another example of bodies’ porous borders, affected by atmospheric changes. But, beyond that, Melville’s very next description of something “impalpable” is also about air—in fact, his next four uses of the word are about either “air” or atmospheric “ether.” The first offers a “nebulous conceit” that entered Pierre’s “soul” but “belonged to the spheres of the impalpable ether.” The second offers conventions “more impalpable than airiest threads of gauze.” And the third brings a stunning claim that even thinkers “reveling in the region of blissful ideals” inevitably “give in” to material “Descartian vortices,” even while holding Kant as “the one great palpable fact in their pervadingly impalpable lives.”

The preponderance of evidence here suggests a strong connection between the “impalpable,” “air,” “ether,” and explicitly materialist “Descartian vortices” that resist “ideals.” And, of course, Melville’s fourth use “impalpable” is our now-familiar reminder that while the “whale” may be an immediate cause of Melville’s famous vortex, eventually causal accounts all melt into the “air”:

The most impressive, sudden, and overwhelming event, as well as the minutest, is but the product of an infinite series of infinitely involved and untraceable foregoing occurrences… not wholly imputable to the immediate apparent cause, which is only one link in the chain; but to a long line of dependencies whose further part is lost in the mid-regions of the impalpable air.

Here “air” is “impalpable,” but it is also taken as a kind of building block or “further part” that serves as a seed of things for events both large and small.

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196 Melville, Moby-Dick, 268.
198 Melville, Pierre, 67.
Melville’s final pages do, unavoidably, draw on Beale’s description of the vortex. And this pattern of horizontal, oblique, and modified ways of striking the surface—in ways that consistently prompt contracting but generative pools—render the dramatic conclusion of Melville’s text far less exceptional. (It’s not the only whirlpool). Even so—just like a reading of “Descartian vorticities” can’t possibly account for these clear references to Beale—this reading is clearly limited by the fact that Beale’s vortices repeatedly coexist with ships. In his chapter on “Chase and Capture of the Sperm Whale,” for example, Beale explains that “when in pursuit of the whale with the boats, it occasionally happens that just at the moment the harpoon is about to be plunged into its body, the whale suddenly descends, leaving nothing but a vortex to mark the spot.” Then, far from running in fear, “the boats are placed in a position to be as near as possible to it when it again rises to breathe.”199 But Melville obviously lets small boats survive these whirlpools on three different occasions. So while these vortices might manage to sink a small whaleboat, they simply couldn’t sink the Pequod. There is more going on here, and the clearest answer seems to be in the suggestion that whales’ actions are eventually dependent on air.

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In thinking seriously about this vortex in terms of air, it seems important to ask: what if the Pequod were hit by a storm? Ahab won’t stop to fix his “leak” amidst “life’s howling gale.” And when he starts the story of his trip, Ishmael worries about not being able to defend against the weather. Melville also seems to tip his hat when he offers a page-long description of Ishmael reading a painting at the start of his Moby-Dick’s third chapter “The Spouter-Inn”: It was only by diligent study and a series of systematic visits to it… that you could any way arrive at an understanding of its purpose. Such unaccountable masses of shades and shadows, that at first you almost thought some ambitious young artist… had endeavored to delineate chaos bewitched.”200

199 Beale, Natural History of the Sperm Whale, 159.
200 This work seems most comparable to a Turner painting, which was certainly on Melville’s mind as he was writing. He wrote on the frontispiece of his copy of Beale in 1850: “Turner’s pictures of Whalers were
Clearly its message is far from clear; in fact, Ishmael explains, “it was only by diligent study and a series of systematic visits to it… that you could any way arrive at an understanding of its purpose.” But weather becomes central as he concludes:

In fact, the artist’s design seemed this: *a final theory of my own*, partly based upon the aggregated opinions of many aged persons with whom I conversed upon the subject. The picture represents a Cape-Horner in a *great hurricane*; the half-founded ship weltering there… and an exasperated whale, purposing to spring clean over the craft, is in the enormous act of impaling himself upon the three mast-heads.201

Surely we all recognize this story, which is stunningly similar to the end of *Moby-Dick*. But this is Ishmael’s telling conclusion—years later—as he worked to “recall all the circumstances” of what seems to have been a traumatic experience. It’s difficult to not wonder whether this offers a kind of reading guide for “diligent study” of Melville’s own famously “unaccountable” book. But at the very least, hurricanes were, unavoidably, on Melville’s mind.

When *Moby-Dick* was published the “American Storm Controversy” had been running strong for thirty years. There were prolonged debates—heated, charged debates—about the causes and the nature of storms.202 William Redfield focused on whirlwinds or “rotary storms,” which involved particles that revolved around a *vertical axis*. For Redfield each storm was a gravity-driven, upward-moving “*aerial vortex*” reminiscent, I think, of Melville’s final scene. The paradigms for this model were hurricanes, tornadoes, tempests, and waterspouts, which weren’t clearly defined or demarcated at the time.203 And Redfield—like Ishmael looking back to sort out

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203 Fleming, *Meteorology in America*, 63. Melville clearly doesn’t offer the land versus sea distinction between tornadoes and hurricanes that we have today. He describes, for example, a “hurricane that sweeps the plain,” which we would call a tornado. And when he declares “stand up against the general hurricane, they one tost sapling cannot” to Starbuck, he is squarely on land. This reference to “one tost sapling” also seems to be a reference to Redfield, whose work to map storms started with tracing where trees had blown.
the Fates’ “springs and motives”—would try to understand the mechanics of storms by piecing together the traces that each one left behind, carefully considering both sites of impact and any available journals, accounts, or reports that could help him reconstruct storms’ paths.\footnote{204}

*Fig. III. Providence Tornado.*

Redfield would try to read “the traces of the wind” based on where objects had blown. \(\text{Image courtesy of the Dibner Library, Smithsonian Institution Libraries.}\)

Redfield’s language clearly resonates with Melville’s. For Redfield “prostrations” occur “chiefly under the closing action of the whirl” or the “closing action of the vortex” around a “vertical axis.”\footnote{205} Meanwhile Melville’s “ever contracting” “closing vortex” also spins around an “axis.” Redfield’s vortices are also “more clearly seen as we advance from the left-hand margin towards the centre.”\footnote{206} And this is certainly one possible source for Melville’s play with the idea of Ishmael “floating on the margin of the ensuing scene” and drawn in slowly.\footnote{207}

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\footnote{204} Melville writes, near the conclusion of *Moby-Dick’s* first chapter: “Now that I recall all the circumstances, I think I can see a little into the *springs and motives* which… induced me to set about performing the part I did, besides cajoling me into the delusion that it was a choice resulting from my own unbiased freewill and discriminating judgment.” Herman Melville, *Moby-Dick*, 22.

\footnote{205} William Redfield, *On Whirlwind Storms*, 6, 11.

\footnote{206} Redfield, *On Whirlwind Storms*, 56.

\footnote{207} Melville, *Moby-Dick*, 426-427.
Meanwhile Redfield’s key interlocutor in the storm controversy, Robert Hare, opted for a more deductive approach. While Redfield—like Ishmael—tried to reconstruct events via their traces after storms, Hare insisted that storms simply had to be analogous to his electrical experiments. They were all, ultimately, caused by the build-up and release of static electricity in the atmosphere, which behaved just like a Leyden Jar.\(^{208}\) Hare’s work also resonates with Melville. At least there are certainly traces of both his method and this content in Captain Ahab. I have, of course, developed the connection between Melville and Hare’s way of imagining non-standard forms of Leyden Jars. And for Hare—as for Ahab, mapping derivations from his charts—things logically had to be a certain way.

It may overstate the case to claim that the American Storm Controversy helped shape the stunningly different methodologies of Melville’s dual protagonists. And yet, Melville was clearly reading this material. His biography and his language both suggest a clear interest in contemporary meteorology. And it seems equally reasonable to suggest that the real-world meteorological drama staged in newspapers across the United States did help Melville create—or, perhaps, clarify—the modes of thought that Ishmael and Ahab embodied. In short: in the place of formal discussions of Ishmael’s “circle” and Ahab’s “line,” this reading gives us a more compelling and historically grounded account of their related approaches.\(^{209}\) Ishmael is cautiously and patiently an inductive natural historian. And Ahab is experimental. On “The Quarter-Deck—or with maps in his cabin in “The Chart”—or with his compass in “The Needle”—we see Ahab make predictions and then test their results. And yet, as these two very disparate characters

\(^{208}\) Fleming, *Meteorology in America*, xviii, 26, 34, 38; Robert Hare, *Queries and Strictures, Respecting Espy’s Meteorological Report to the Naval Department* (R.W. Barnard & Sons, printers, 1852), 11. “Hurricanes may be considered as the consequence of a convective electrical discharge on a vastly more extensive scale than tornadoes,” Hare explained, since the scale of immensity of electrical discharge had no limits. “All that is essential to an accumulation of electricity analogous to that which may be secured by means of a coated pane or Leyden jar is, that there shall be a suitable electric to fill the office performed by the glass in thos instruments.” And here the “denser portion of the atmosphere,” beneath “storm-clouds and the earth, is competent to act as an electric.” So that air “may be charged like a Leyden jar.”

attempt to make sense of the weather, they ultimately capture nothing but air.

When Melville discusses causation as something lost “in the mid-regions of the impalpable air” in *Pierre*, he begins with exactly this point: “In their precise tracings-out and subtile causations, the strongest and fieriest emotions of life *defy all analytical insight*. We see the cloud, and feel its bolt; but *meteorology only idly essays* a critical scrutiny as to *how* that cloud became charged, and how this bolt so stuns,” which are ultimately “but the product of an infinite series of infinitely involved and untraceable foregoing occurrences.”²¹⁰ The most basic component of Melville’s claim is that meteorology—like the “emotions of life”—defies our attempts at analysis. In fact, instead of answers we always find an infinite regress of events that can’t be traced. But despite critics who read this moment as a signal of impossibility or resignation, we should also remember that this was a moment that work in chemistry and meteorology was developing at an unprecedented rate. And on the heels of the development of the very idea of atomic weights and the periodic table, being *impalpable* was not the same as being *absent*.²¹¹

The conflicts of the “Storm Controversy” were supported, in part, by very a confident belief that some grand synthesis was destined. These debates had quite a bit of promise in the 1830s and 40s. In fact, at a moment when members of the “Young America” movement were clamoring for the development of a national literature, meteorology may have served as our national science. Prominent French physicist and astronomer François Arago even declared: “England has its Newton, France its Cuvier, and America its Espy”—the third participant in the conflict with Redfield and Hare—and the first director of what is now the National Weather Service.²¹² And Melville’s former teacher, Joseph Henry, who used his position as the first Secretary of the Smithsonian to transform the field of meteorology, offered, for example, that these theories,

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²¹¹ I discuss the transformation of chemistry in the mid-nineteenth century in detail in my second chapter.

“contradictory as they may now appear, will probably be found not incompatible with each other; and they will undoubtedly form the most important steps towards the widest generalizations which have yet been attempted in reference to the complex phenomena of the atmosphere.”²¹³

Melville repeatedly found himself in the midst of important meteorological developments. As I discussed in detail in my prefatory biographical chapter, he enrolled in the Albany Academy in the Fall of 1830. And after years as a less than stellar student, in 1831 he shocked everyone by finishing first in his class—taught by Joseph Henry.²¹⁴ That year Henry didn’t only construct the first prototype of a telegraph machine or the strongest magnet ever constructed. He also made a name for himself, that year, as a brilliant experimentalist, who studied thunderstorms, lightning, and other atmospheric phenomena related to electricity and magnetism.²¹⁵

In 1831 the Albany Academy was also the national center of work on meteorology, thanks to a law that the fifty academies chartered by the state had to provide annual meteorological reports in order to receive funding. This made it the very first large-scale weather “system” (then a term used to describe collections of reporters, not large storms). Data sheets were sent to the capital from across the state, and the school’s principal, T. Romeyn Beck, collected and reported the results—along with Joseph Henry, who went on to dedicate thirty percent of the research budget of The Smithsonian Institute to an even more extensive “system of extended meteorological observations, for solving the problem of American storms.

By 1840 the Meteorological Association of Williams College constructed the first private “observatory” in the nation. It was on Mt. Greylock, within walking distance of Arrowhead, Melville’s home in the Berkshires. And this was an important space for Melville. To begin with,

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²¹³ Fleming, Meteorology in America, 49.
²¹⁴ Parker, Melville: A Biography, 55.
²¹⁵ Fleming, Meteorology in America, 21. A far more detailed account of this narrative is provided in both my first chapter and Meredith Farmer, “Herman Melville and Joseph Henry at the Albany Academy; or, Melville’s Education in Mathematics and Science,” Leviathan 18, no. 2 (2016): 4–28.
he met Hawthorne there. Pierre is dedicated “To Greylock’s Most Excellent Majesty.” And the 50-foot weather tower would have been visible from both the window of Melville’s study and his famous, one-sided piazza.

Melville, in turn, uses the image of a ship taken out by the whirling of a vortex, hurricane, or storm on more than one occasion. In Omoo we read of a ship where “the eddies were whirling upon all sides.” By Redburn fishermen have “little vessels” that are “sometimes run down, and obliterated from the face of the waters; the cry of the sailors ceasing with the last whirl of the whirlpool that closes over their craft.” And in Mardi we encounter “braggarts gone down before hurricanes” and a storm that “seemed about to overtake” a ship, just as a “prominent milk-white crest” formed on the surface of the ocean.” This certainly resembles the way that the “surface” “creamed like new milk” in Moby-Dick. And just like no one is ever described as dying in Moby-Dick or Redburn here the crew experienced “a blending of sights and of sounds” until a sailor was not killed but “swallowed up in the whirlpool” under the ship’s lea.


218 “Meteorological Observations and Researches. At Williams College.” Berkshire County Whig 25 Nov. 1841 : 3. Print. “The direction and force of the wind bring important elements in meteorological research, and it being impracticable to determine them with accuracy in a confined valley like Williamstown, the idea was suggested of erecting an Observatory on the Gray Lock peak of Saddle Mountain, where self registering apparatus might be fitted up for the purpose. It had long been felt desirable that there should be a building there for the accommodation of visitors, the mountain being the highest in the state, and commanding a prospect inferior in extent to none in the United States; and the combined enterprise of the inhabitants of Williamstown and Adams, aided by the students of the college, effected the erection of the tower for the two-fold object, about 50 feet high and 24 at the base. Prof. Hopkins has also erected an observatory near the college for observations and experiments on atmospheric electricity and terrestrial magnetism.” Coffin’s papers at the Smithsonian Institute (RU 7060 in the SI Archives), and the Williams College Observatory Meteorological Records in Williams College’s Special Collections.

219 Melville, Omoo, 27.

220 Melville, Redburn, 97.

221 Even when we are told that “one vast water-spout will, sudden, form: and whirling” like a kind of “Death-cloud” its whirling only “dragged down every plank and soul.” Melville, Mardi, 91, 117, 587.
In *White-Jacket* at Cape Horn sailors find a hurricane.\textsuperscript{222} In *Moby-Dick* we learn that in Japanese seas sailors encounter the Typhoon.\textsuperscript{223} And *Mardi* goes on to offer a kind of precursor to *Moby-Dick*’s vortex when, in the wake of a storm, we are told: “we floated a wreck.” Four days passed. And, finally, in a dream, we find, Yillah “plunging into a vortex” which “went round and round.” He imagines her “descending into depths unknown.”\textsuperscript{224} This vortex returns in “the final scene of Mardi.”\textsuperscript{225} “Round and round,” Taji tells us, Yillah “circled in the deepest eddies.” Then finally her form “darted out of sight, and eddies whirled on as before.”\textsuperscript{226}

Melville also responds to meteorological records directly in *Moby-Dick*’s “The Chart,” which offers a footnote to Matthew Fontaine Maury’s work at the National Observatory. That note grounds Ahab’s “large wrinkled roll of yellowish sea charts,” which he allegedly used to track Moby Dick, by explaining: an “official circular, issued by Lieutenant Maury,” indicated that “precisely such a chart is in course of completion.”\textsuperscript{227} Maury compiled intricate charts of different weather patterns with the help of sailors. In exchange for detailed reports from whaling ships, he offered “track charts” that showed when and where both whales and storms could be found.\textsuperscript{228}

\textsuperscript{222} Melville, *White-Jacket*, 106.

\textsuperscript{223} Melville, *Moby-Dick*, 503.

\textsuperscript{224} Melville, *Mardi*, 118, 138.

\textsuperscript{225} Leonard, “Descartes, Melville, and the Mardian Vortex,” 18

\textsuperscript{226} Melville, *Mardi*, 653.


This pairing of otherwise “ungraspable phantoms”—storms and whales—is especially notable because it persists. Ahab declares, for example, that if the wind just “had a body,” all his problems could be solved. He continues: “all the things that most exasperate and outrage mortal man, all these things are bodiless, but only bodiless as objects, not as agents.” And Moby Dick is described as a “swarm” of “subtle agencies” “made visible.” In short: both wind and whales seem to be “subtle agencies” connected to the “weather” that “wrought on Ahab’s texture.” “Brilliant” Pip also makes this connection when he chants “White squalls? white whale, shirr! shirr!” In fact, this call to “shirr” is a technical reference that brings us back to “Loomings.” It is a call to pull together at least two different threads. This is, after all, a text governed by the idea that “all visible objects” are but “pasteboard masks,” driven by some “unknown but still reasoning thing” that “puts forth the mouldings” or form “of its features.” Ahab offers this famous soliloquy just after he “magnetically” “excited” his crew. And these dual impalpable agencies—wind and whales, both linked by magnetism—do seem to be the invisible objects he chases when he “strike[s] through the mask”—or, at least, attempts to.

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229 In this moment of engagement with “things” that are “bodiless as objects, not as agents,” we might also turn—once again—to Lucretius. After discussing the ways that “the force of the wind” can sweep the earth with an “impetuous hurricane,” he adds: “the winds, then, are invisible bodies, which sweep the sea, the land, the clouds of heaven, and, agitating them, carry them along with a sudden tornado.” He goes on to explain that “blasts of the wind,” “like a mighty flood,” “drive all things before them, and overthrow them with repeated assaults, and sometimes catch them up in a writhing vortex and rapidly bear them off in a whirling hurricane.” Then he continues: “I repeat, the winds are substances, though invisible, since in their effects, and modes of operation, they are found to rival mighty rivers, which are manifest bodily substance.” Just like “we perceive various odors of objects, and yet never see them approaching our nostrils”—just like we never “behold violent heat, or distinguish cold with our eyes”—things “must of necessity consist of a corporeal nature, since they have the power of striking the senses: FOR NOTHING, EXCEPT BODILY SUBSTANCE, CAN TOUCH OR BE TOUCHED.” Lucretius, On the Nature of Things, 15-16.

230 Melville, Moby-Dick, 420, 110.

231 Melville, Moby-Dick, 412, 178.


233 Melville, Moby-Dick, 164.
Speculative Materialism

As soon as we think in terms of the invisible, impalpable entities behind and beneath the surfaces of both letters and pasteboard masks we seem to be on physicalist grounds, in a world with ever-fluctuating structures. But I still have not discussed the structural “atoms” that must serve as the foundation for these descriptions. These atoms play a direct role in *White-Jacket* and *Moby-Dick*, especially with regard to vortices and phase transitions, but even, more surprisingly, with regard to the “soul” and “identity.” 234 For example, during *White-Jacket*’s plunge from the masthead—which now requires no introduction—our titular protagonist realized: “all I had seen, and read, and heard, and all I had thought and felt in my life, seemed intensified in one fixed idea in my soul. But dense as this idea was, it was made up of atoms.” He “was conscious of a collected satisfaction in feeling,” or a sense that he—like “smallest chip” of the Pequod—would only “sink into the speechless profound of the sea.” Then, as I’ve explained, his atoms disperse. 235

In *Typee* we learn that “not a single atom of the soil was under any other cultivation than that of shower and sunshine,” which points to awareness of nineteenth-century collaboration between chemistry and agriculture. 236 By *Mardi* we encounter a number of references to atoms: “soul and body” are “glued together, firm as atom to atom.” *Mardi* was built “piecemeal,” “atom by atom.” And the relationship between the nation’s land and its inhabitants is “as the atom to the animalculae,” or tiny animals. 237 In *White-Jacket*, as I have already mentioned, even “ideas” are “made of atoms.” 238 And all of this work predates *Pierre* and *Moby-Dick*.

234 I discuss this connection between atoms and the “soul” in detail in my next chapter.
236 Melville, *Typee*
237 Melville, *Mardi* 433, 600, 578
The question, of course, is: what, exactly, are these atoms or the seeds of things? I have already referenced Lucretius’ atomism, Descartes’ corpuscles, and more contemporary models built on the chemical atomism at the heart of atmospheric electricity. These models all conflict. But in the mid-nineteenth century the only consensus about the building blocks of visible objects was that they were a kind of “imponderable substance.” In short: entities like electricity, heat, and magnetism that obviously had physical existence but that didn’t possess the qualities usually associate with matter, like weight, solidity, and mass. Electricity, as we’ve seen, was something like “an infinitely attenuated or rarefied solid, fluid, or fire,” which is far from well-defined.239 Benjamin Franklin uses a model that seems linked to Melville’s “subtle agencies” when he offers that “the Electrical Matter consists of Particles extremely subtile, since it can permeate common Matter, even the densest Metals, with such Ease and Freedom, as not to receive any perceptible Resistance.”240 But Lucretius’ account of winds as “invisible bodies” in a world where “nothing except bodily substance” can be touched seems equally important.241

It is difficult to locate Melville’s sources because so many possibilities present themselves. For example, as early as 1834 Samuel Metcalf published an essay on “Molecular Attractions” for The Knickerbocker. He begins by reviewing his work on “Terrestrial Magnetism,” explaining:

All the forms of caloric and electricity are only modifications of a subtile, imponderable and universal element, which pervades all space, and combines intimately with all other matter, forming a constituent portion of it; that its universal presence and unequal distribution throughout nature is the cause of all the various attractions and repulsions of matter with which we are acquainted—that a complete history of the caloric would embrace an account of all the changes and transmutations would perpetually go on throughout matter.242

This reference to the “subtile, imponderable and universal element” obviously resonates with Melville’s “subtle agencies.” His discussion of “transmutations” resonates with his explicit

239 Harold Aspiz, “The ‘Lurch of the Torpedo-Fish’,” 128.
240 Franklin, Experiments And Observations On Electricity, 54.
declaration that “death is transmuted into life,” which I discuss in my next chapter.\textsuperscript{243} Three pages later Metcalf adds that “without caloric there could be no capillary attraction, because there would be no fluidity,” which clearly resonates with the introduction to White-Jacket. And finally, this idea of embracing that “all the changes and transmutations would perpetually go on throughout matter” is exactly the logic that I’ve worked to articulate.\textsuperscript{244}

Metcalf’s essay indicates that “the whole visible universe” was supposedly “made up of inconceivably small, indivisible atoms, so arranged and combined as to form the infinite diversity of animal, vegetable, and mineral substances.” This originated with Pythagoras and other Greek philosophers, eventually leading to Lucretius, but “the moderns” revived it “on the basis of the inductive philosophy.” So, following Dalton, he discusses elements combining to form different compounds, atomic weight, the law of definite proportions at the heart of atomic theory (i.e. two hydrogen atoms and one oxygen atom make water), and the way that all of this work is “deduced from the experiments of modern chemistry.”\textsuperscript{245}

These kinds of ideas were available to Melville through all sorts of derivative sources. But Metcalf’s language seems especially relevant. He sees “caloric” as the answer to Isaac Newton’s “ether,” since it is a ubiquitous substance “more subtile than light” and “the cause of all motions and transmutations of terrestrial matter—of decomposition and re-combination—of secretion, nutrition, growth” and more.\textsuperscript{246} Metcalf adds that his “object” is to “prove that caloric and electricity are only different forms and modifications of the same subtile element which pervades the universe, and gives to it all its motions, mechanical, chemical, and physiological.”

And here he turns to phase changes: specifically the ways water vapor is released by lightning.

\textsuperscript{243} Melville, Pierre, 9.
\textsuperscript{244} Metcalf, “Molecular Attractions,” 332.
\textsuperscript{245} Metcalf, “Molecular Attractions,” 335.
\textsuperscript{246} Metcalf, “Molecular Attractions,” 341.
He also imagines—like Melville—that “almost every transmutation which takes place throughout nature, results from the combination of oxygen with other elements.”

Finally, Metcalf concludes with a suggestion of exactly the kind of hope I have attributed to Pierre: belief that eventually we might understand what was, in 1852, clearly “lost in the mid-regions of the impalpable air.” He writes that when we finally understand this process “it will be found that chemistry and physiology are the two main pillars of the Temple of Science—that they are indispensable to a sound, practical knowledge of the physical and intellectual constitution of the world. We shall then see, that all revolutions of the globe, are ultimately resolvable into chemical agency—that mountains are upheaved by the expansive power of heat, liberated in the interior of the earth by chemical action, and crumbled into ruins by chemical decomposition.”

Even if we are unable to determine what “atoms” really “are,” this atomic account is the foundation for Melville’s works’ moments of forceful determinism. In fact, Ahab channels an atomism that directly rejects Lucretius’ more liberal picture. For Lucretius, “swerve” (clinamen) is unpredictable, indeterminate motion that allows “atoms” to give way to compound forms. And this “swerve” means the universe could never be completely predetermined. But Ishmael counters this model directly in Moby-Dick’s “The Spouter-Inn”: “it’s too late to make any improvements now. The universe is finished; the copestone is on, and the chips”—like what remains of the Pequod—“were carted off a million years ago.” This rejection of “swerve” is all but explicit in “Sunset,” when Ahab articulates his mechanical status in undeniably anti-Lucretian terms: “come and see if ye can swerve me. Swerve me? ye cannot swerve me... The path to my fixed purpose is laid with iron rails, whereon my soul is grooved to run... Naught’s an obstacle,

247 Metcalf, “Molecular Attractions,” 336. In “The Battering Ram,” as I have mentioned, Melville describes oxygen as “the most impalpable and destructive of all elements.” Moby-Dick, 337.


250 Melville, Moby-Dick, 25.
naught's an angle to the iron way!” His soul is going to run, mechanically, much like a railroad engine (sans derailment) follows its tracks. It will yield to nothing, and its course is set. And these moments are directly opposed to “swerve” at both linguistic and ideological levels.

We might be tempted to view this mention of “swerve” as incidental, but it returns as an even more explicit response to Lucretius in “The Mat-Maker.” There we encounter “the straight warp of necessity, not to be swerved from its ultimate course.” That warp, it turns out, “seemed necessity,” and here Ishmael even announces himself as a compatibilist, explaining that he watches “chance, free will, and necessity—no wise incompatible—all interweavingly working together.” This is the return of “a certain self-adjusting buoyancy and simultaneousness of volition and action” that allows us to balance. “The Mat-Maker” goes on to explain, again, in refutation of Lucretius’ swerve, that chance does have “the last featuring blow at events” and is prescribed to by “free will.” Except that “will” exists only “between given threads” which are “restrained” “within the right lines” “of necessity.” Or, in the vernacular, we do what we “will”—but only because we happen to “choose” whatever we do: an argument at least as old as Jonathan Edwards’ *The Freedom of the Will.* With this realization, Ishmael tells us, “the ball of free will dropped from my hand” As “The Spynx” concludes: “O Nature, and O soul of man! how far beyond all utterance are your linked analogies! not the smallest atom stirs or lives on matter, but has its cunning duplicate in mind.” And after two days of the chase, Ahab asks: “‘D'ye feel brave men, brave?’” Stubb replies, “‘As fearless fire.’” And Ahab mutters: “‘And as mechanical.’”


252 As I discuss in my introduction, Melville’s account of his engagement with philosophical compatibilism is really quite powerful: “All events are mixed in a fusion indistinguishable. What we call Fate is even, heartless, and impartial… everlastingly sustains an armed neutrality. *Yet though all this be so,* nevertheless, *in our own hearts,* we mould the whole world's hereafters; and in our own hearts we fashion our own gods… In two senses, we are precisely what we worship. Ourselves are Fate.” Melville, *White-Jacket*, 320. For discussions of Melville and Edwards also see Lee, *Uncertain Chances*, 51-54 and Branka Arsić, *Passive Constitutions, or, 7 1/2 Times Bartleby* (Stanford University Press, 2007), 14-23.


Melville’s model may be mechanistic and deterministic, but *it is no naïve materialism.*

In fact, Melville draws out an important element of Latour and Whitehead’s thought that most critics have overlooked: the idea that causation, or what Whitehead terms “causal efficacy,” always takes place on multiple levels below the threshold of our awareness. Ishmael surmises, for example, that the whale “may possibly have some hitherto unknown and unsuspected connexion with the outer air, as to be susceptible to atmospheric distension and contraction.” Then he dwells on the whale’s “susceptibility” to pressure changes in its atmosphere. His thought experiment continues: “fancy the irresistibleness of that might, to which the most impalpable and destructive of all elements contributes.” The whale—and I’ve suggested, Melville’s “persons”—is strongly affected by “unknown and unsuspected,” imperceptible, elemental forces in the “outer air” beyond it. What Whitehead theorizes more explicitly is that we can ultimately “know” of these “subtle agencies” only by speculation—or, in Melville’s words, surmises.

This “speculative materialism” gives us a way to finally make sense of *Moby-Dick’s* “Etymology,” which begins with a curious statement: “While you take in hand to school others, and to teach them by what name a whale-fish is to be called in our tongue, leaving out, through

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257 The tradition of viewing “atoms” or the “seeds of things” as impalpable material that *must exist* without being empirically known is as old as Lucretius, who offers: “I have shown that things cannot be produced from nothing, and also that, when produced, they cannot return to nothing.” And yet, he acknowledges and adds, if readers “begin to distrust [his] words” since “the primary particles of things cannot be discerned by the eye,” he wants them to understand “what substances thou thyself must necessarily confess to exist, although impossible to be seen.” Their existence—however necessary—is a logical *inference*. Lucretius, *On the Nature of Things*, 15. In the late eighteenth century Benjamin Franklin makes a similar explicit turn to abduction, or inference to the best explanation, when he offers in an account of the “operation of points” in lightning rods: “I have some doubts about them. Yet as I have at present nothing better to offer in their stead, I do not cross them out: for even a bad solution read, and its faults discovered, is often given rise to a good one in the mind of a genius reader. Nor is it of much importance to us to know the manner in which nature executes our laws, it is enough, if we know the laws themselves. It is of real use to know, that China left in the air unsupported will fall and break; but how it comes to fall, and why it breaks, are matters of speculation. It is a pleasure indeed to know them, but we can preserve our China without it.” Franklin, *Experiments And Observations On Electricity*, PG.
ignorance, the letter H, which almost alone maketh up the signification of the word, you deliver that which is not true.”\textsuperscript{258} The “whale,” then, is not a “wale,” or a mark: welt, scar, or skeleton. Like welts in White-Jacket or tattoos in Typee, wales mark permanence.\textsuperscript{259} Meanwhile Moby Dick—who Melville describes as both the “image of the ungraspable phantom of life” and a “hooded phantom”—is constantly paired with “impalpable” “elements” from the atmosphere. (This should call forth the “shirred” connection between wind and whales: both “bodiless as objects” but “not as agents. Moby Dick, again, is a “swarm” of “subtle agencies” “made visible”).

\begin{figure}[h]
    \centering
    \includegraphics[width=0.5\textwidth]{whale.png}
    \caption{A Whale. From Comly’s A New Spelling-book, 1806.}
\end{figure}

Wale, n.1: 2a. The mark or ridge raised on the flesh by the blow of a rod, lash, or the like.
3a. Textiles. A ridge or raised line (consisting of a thread or threads) in a textile fabric; also collect. with epithet, as indicating the texture of a particular fabric.
4b. pl. The horizontal planks or timbers, broader and thicker than the rest, which extend along a ship’s sides, at different heights, from stem to stem; also called bends.

Wale, n.2: 1.a. The action or an act of choosing; choice.\textsuperscript{260}

This final account—or framing the “whale” as something other than “choice”—takes us directly to Melville’s source. This portion of his “Etymology” is drawn from Richard Hackylut, whose sentence continues: “for val in our language signifieth not a Whale, but chusing or choise of the verbe Eg vel, that is to say, I chuse, or I make choise, from whence val is deriued, &c.”

\textsuperscript{258} Melville, Moby-Dick, 20, 22.
\textsuperscript{259} For a helpful reading of the relationships between permanent markings and both welts and tattoos see Otter, Melville’s Anatomies, 20-49, 60-78.
Hakluyt’s broader call is to historians, to whom he implores: “go not farther then your skil.” Here he tells them: “such a false and senselesse ouer-reaching doeth exceedingly disgrace an historie.” After all, he asks, “or to what purpose should an Historiographer make leasings, if history be a report of plaine trueth”—or the “unvarnished truth” that frames his very first book. And this moment is about not making claims that “overreach” exactly by turning to the impalpable element, or silent “letter H, which almost alone maketh up the signification of the worde.”

This reading gives us a way to make sense of the otherwise puzzling conclusion of “Loomings,” when whales float in a stream of “endless processions” into Ishmael’s “inmost”—and thus curiously spatial—“soul.” “Whales,” defined by their impalpable element, or silent “H” produce a kind of invisible determinism that is very different from conscious “choice.” And the overreaching involved in imagining any other “signification” is a kind of historical overreaching that simultaneously “disgraces history” and “deliver[s] that which is not true.”

The “whales” in “Loomings”—like Lucretius’ atoms—seem to be material but imperceptibly small elements that can move through textures. The central whale is even “one great hooded phantom,” which suggests that he may be the coated or visible manifestation of the otherwise imperceptible “whale.” This reading clearly resonates with the “image of the ungraspable phantom of life,” which Melville offers as “the key to it all.” And it clearly connects with Ahab’s insistence that “all visible objects” are but “pasteboard masks,” driven by some “unknown but still reasoning thing” that “puts forth the mouldings” or shape “of its features.” Finally, in this moment of “endless processions of the whale” we are told that “the great flood-gates of the wonder-world swung open,” as if—perhaps—we are explicitly encountering both the language of Melville’s fictional narrative and the equally speculative atoms that Melville pairs with letters.

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261 Melville, Typee, xiv.
262 This passage is from the fourteenth section of Richard Hakluyt, The Principal Navigations, Voyages, Traffiques, and Discoveries of the English Nation (London: E. & G. Goldsmid, 1885).
263 Melville, Moby-Dick, 22, 268.
This is the overlooked and largely unexplored beginning of Melville’s *Moby-Dick.*

Melville pushes this point even further in *Pierre* when he merges the “hooded phantom” with the invisible nature of both “air” and “storms.” Pierre attempts to escape the image of Isabel’s face, which “wrought upon him.” It is sent from the “regions of irradiated air.” And here Pierre thinks that he has held “all stories of ghostly mysticalness” too “lightly.” “My creed of this world,” he thinks, “leads me to believe in visible, beautiful flesh, and audible breath… but only in visible flesh, and audible breath, have I hitherto believed.” Now, he tells us, things are changing. “He felt that what he had always before considered the solid land of veritable reality, was now being audaciously encroached upon by bannered armies of hooded phantoms”— and like the whales afloat in *Moby-Dick*— these “phantoms” were, specifically, “disembarking in his soul.”

Melville emphasizes chemistry in *White-Jacket,* electromagnetism in *Moby-Dick,* and geology in *Pierre.* But as far as Melville’s ontology is concerned, here we simply do not find a “difference that makes a difference.” If these models do change, they only treat “decomposition by addition”— or the idea of varnish or augmentation— from a different angle. And Melville’s use of narratives from “science” is slippery throughout. He’s layering— texturing— different work from different time periods in productive ways, and what they hold in common is that instead of being used as some “code” or a stable “ontology,” they’re used as inferences to the best explanation, or the best placeholders— things treated as real— for articulating patterns of material circulation and impalpable accrual at all levels. This is by no means the “speculative realism”

264 The most serious reading of this passage thus far seems to be Charles Mabee, *Reimagining America: A Theological Critique of the American Mythos and Biblical Hermeneutics* (Mercer University Press, 1985), 70-71, which at least seriously engages with the “Etymology.” Mabee asks “what is an usher, and why would Melville resort to such an image?” His answer is that “usher” is related to the Latin *os,* which means “mouth or orifice.” An usher, he tells us, makes oral introductions between persons (who would not be able to distinguish between “whale” and “wale). These figures are also potentially assistant teachers in a school. Mabee’s interpretation of these two meanings is that “Melville means to introduce us to an ‘unkown’ kind of story. The “usher” introduces us. Then he can be ignored. Finally, in his dusting of grammars Mabee turns to the idea that “man is dust and shall return to dust at death.” And dust accumulates in ways that mark deterioration, such that here books, words, and concepts must be dusted to get to long-forgotten layers and deeper meanings.

made popular by Graham Harman and Tim Morton, which imagines a “real” “object” that is “withdrawn” from us. Instead what speculative materialists ultimately make clear—in attempting to discuss what is, by definition, imperceptible—is that the very idea that we process and respond to things without “consciousness” or “presentational immediacy” is necessary if we wish to begin not with our own transcendental subjectivity or with phenomenological reductions but with the possibility of something—anything—beyond ourselves.266

266 Whitehead and speculative philosophy have accumulated years of negative reception as something mystical, if not theological. But as Didier Debaise explains in “The Subjects of Nature” (Pli: The Warwick Journal of Philosophy, forthcoming), Whitehead’s “philosophy of organism,”—the idea that we are “subjects of nature,” or emergent from the world but still immanent in it—is a speculative philosophy that isn’t necessarily opposed to empiricism. As we see with Latour, its idea is to follow the pragmatic trajectories and environments of subjects’ associations. My suggestion, here, is that decades before Whitehead Melville offers a similar response to Hume’s skepticism about causality in a way that’s dialectically opposed to Kant’s solution. In short, he posits causation not via the transcendental human subject that unites an otherwise passive world of mere data but via a rich environment that produces many subjective events and many levels of awareness. This is possible because of the speculative move to posit interactions we can’t see—but which other systems (e.g. technology or media) might help us register. For this line of thought I am indebted to Steven Shaviro’s Without Criteria: Kant, Whitehead, Deleuze, and Aesthetics (MIT UP, 2009); Brian Massumi’s, Semblance and Event: Activist Philosophy and the Occurrent Arts (MIT UP, 2011); Didier Debaise’s “The Subjects of Nature” (2012); Tim Morton’s Hyperobjects (Minnesota UP, 2013); Nicholas Gaskill & Adam Noeck’s The Lure of Whitehead (Minnesota UP, 2014), and Steven Shaviro’s The Universe of Things: On Speculative Realism (Minnesota UP, 2014), along with Mark Hansen and Rob Mitchell’s 2012 Sawyer Seminar on “Phenomenology, Minds, and Media.”
2. Cognitive Distributions

Poe is preoccupied with burial alive, which is ultimately a dualistic conception: the anxiety is of a mind that watches its own material extinction. This is especially apparent in “The Premature Burial,” along with The Narrative of Arthur Gordon Pym, where we find Poe’s protagonist “nearly suffocated and groveling in utter darkness,” surrounded by “loose earth” that was “threatening to bury [him] entirely,” rendering him both “lost forever” and “entombed alive.” Historian of Medicine Jan Bonderson reminds us that in antebellum America the possibility of being buried alive—or the absolute horror of Poe’s famous “we have put her living in the tomb!”—was a real concern, not just a gothic fantasy. But, even so, here fantasy is obviously in play. When we think materially instead of phenomenologically, after all, a “nearly suffocated” body simply couldn’t be as self-aware as Poe’s protagonist. He vividly imagines a fully conscious subject confronting death with a kind of total awareness that would be physiologically impossible. And amidst Poe’s seemingly materialist discussion of “pauses” in the “mechanism” of “man the unit”—the very “cessations” of the “functions of vitality” that make these untimely internments possible—Poe asks his readers, explicitly, “where, meantime, was the soul?”


3 The protagonist of “The Premature Burial” offers a memorable list of clear sense perceptions and concerns. But in considering implausible cognitive function during suffocation, we should also turn to “Loss of Breath.” That story’s protagonist has no oxygen but is supposedly still able to have distant, seemingly out-of-body thoughts. Even hanging from a noose “he” still survived, fully alert, since he “had no breath to be, suspended.” Edgar Allan Poe, The Works of Edgar Allan Poe (New York: C. Scribner’s Sons, 1894), 91, 103.
Melville, conversely, presents readers with apparent somnambulists like Ahab, Pierre, and Benito Cereno. This characterization arises concomitantly with an assumption that the body can be “on” while the mind is “off” because consciousness is a product of emergence and scaffolding. Melville mentions somnambulism in at least half of his best-known work: Redburn, Mardi, Moby-Dick, Pierre, “Benito Cereno,” “The Encantadas,” and Clarel. Those sleeping figures make “half-unconscious, automatic motions” with “absence of mind” in ways that clearly indicate that Melville borrows from Benjamin Rush. And ultimately Melville’s multitude of references to somnambulism—along with other diseased states that Rush sees as related, including dreams and reveries—should remind us of Melville’s clear interest in materialist psychology, along with the possibility that both “life” and higher-order cognitive processes might be the products of material interactions and not just vital force.

In this chapter I will offer an account of Rush’s model, which I will use to ground Melville’s surprisingly frequent portrayal of sleepwalkers and characters in states of “reverie.” But my interest is ultimately in the model of distributed, materialist cognition that Melville’s portrayal of somnambulism seems to reference and require. And here my concern is ultimately about the question of self-organization, or about how—if Melville imagines an “ontology” that is ultimately about flux, or if everything circulates—we can ever have any “thing” at all—much less something as advanced as human cognition. Or, in the language of contemporary critical theory: how, exactly, do any assemblies have duration? How do they do what Whitehead describes as forming “societies”? The short answer we find here, I will argue, is structure.

Here I’m interested in situating Melville’s “decomposition by addition”—or changes to identity that focus on what is generated instead of what is lost—at the level of “organized

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4 Melville, who cites John and Charles Bell’s The Anatomy and Physiology of the Human Body, is thinking seriously about instinct, reflex, and automatic processes. Mary Bercaw, Melville’s Sources, (Northwestern University Press, 1987), 37.

5 Jennifer Fleissner’s very related forthcoming work on Melville and “maladies of the will” deals with a number of French thinkers whose work on nerves seems relevant, but her work doesn’t deal with Rush, who seems to be a conceptual match, even if his work isn’t as current.
structures”—not atoms circulating in a vortex but the things that are actually built up—like “life” and “cognition.” And I do this by turning to three possible conditions of possibility for Melville’s way of thinking: Darwin and coral insects that Melville describes as “weaver-gods,” Lyell and a sort of geological mode of thinking in terms of layers, and the beginnings of organic chemistry, or consideration of “life” as something that’s based in what chemists described as “organized structures” instead of vital force. I will discuss coral insects and geology—Darwin and Lyell’s work, among others—but ultimately I will focus on chemistry—or Melville’s materialist and structuralist approach to the idea of “life,” “cognition,” and even the “soul”—before offering a reading of Melville’s penultimate piece of published prose, “The Apple-Tree Table.” It brings us to what will ultimately be this chapter’s central claim: in the moment of the formal development of chemistry—and materialist ways of thinking about humans—Melville doesn’t fully commit to a structuralist model, but he wrestles with it very actively.

The idea that life—and consciousness—are products of complex material and structural organization clearly isn’t new for readers of related work in theory—or biology—or complex adaptive systems. Here we might turn, for example, to discussions of topics like “emergence” in critical theory, via thinkers like Manuel DeLanda. In Biology, conversely, we might look to Gilbert and Sapp’s recent “A Symbiotic View of Life: We Have Never Been Individuals.” But the secondary goal of this chapter is to develop an historical claim: Melville wasn’t just a “genius” whose work serves as a remarkable precursor to ideas that some of us support today. Instead the idea of “emergence” was made possible by developments in chemistry, along with biology and geology, in the 1830s and 40s—as Melville was avidly reading it and developing the lines of thought that we see throughout his work.

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Pathologizing Reverie: Melville, Rush, and the “Absence of Mind”

Benjamin Rush views “reverie” as a neurological illness caused by an “absence of mind,” much like other diseases from unrequited love to somnambulism and even catalepsy. And here it’s well worth asking: why is “reverie” a disease? What does it have in common with abrupt loss of consciousness we see in catalepsy? And how does it connect to the “habitual exercises” that are, somehow, conducted during bouts of somnambulism, without any recollection?\(^8\)

The answer, it turns out, is in losing the direct tie to *sense impressions*. For Rush, reverie is “induced by two causes.” The first is external: “the stimulus of ideas of absent subjects” is so powerful that they “destroy the perception of present objects.”\(^9\) And the second cause of reverie is internal. It is prompted by a “torpor” or inactivity of “mind” so strong that the subject is unable to actually “feel the impressions of surrounding objects.” This model offers more agency to the subject, whose “insensibility of the senses” is linked to a lack of effort. But in both cases reverie is about cognitive distance from one’s immediate surroundings. Rush’s model of the “healthy” “mind” is ultimately dependent upon receiving and responding to immediate sense impressions in the present moment. And this healthy mind must also be linked to activity—or what Rush describes as *employment*.\(^{10}\)

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\(^8\) Rush, *Medical Inquiries and Observations*: 308.

\(^9\) Rush, *Medical Inquiries and Observations*: 308. We might reframe this as being “haunted;”\(^9\) but for Rush this experience must be grounded in absent sense impressions, like what Melville describes as “elusive thoughts that only people the soul by continually flitting through it.” Herman Melville et al., *Moby-Dick Or The Whale* (Evanston: Northwestern University Press, 1988), 159. In “Benito Cereno” we read, in turn, that “these and other images flitted through his mind.” Herman Melville, *Piazza Tales and Other Prose Pieces*, ed. Harrison Hayford and G. Thomas Tanselle (Evanston: Northwestern University Press, 1987), 74.

\(^{10}\) Here it’s worth noting that Rush uses the idea of mind—but he doesn’t offer a coherent “theory of mind.” This is explicit in the preface to *Medical Inquiries*, when Rush explains that some of the facts he offers are familiar, but he places them “under the direction of new principles”—specifically a commitment that “facts, or precedents, have the same effects in reasoning in medicine, that examples have in morals. They compel the reader to admit the practice they are intended to establish.” Rush, *Medical Inquiries*: 5, 308.
This model of the mind is inextricably linked to the importance of production, or the creation of knowledge applicable to the “useful purposes of life.” And here it’s helpful to unpack what Rush means by “utility” in the face of ever-dangerous reveries. Turning to his prescriptions shows that “constant and noisy company” might actually produce “a predominance of impressions from present objects.” “Stimulants” might help as well. And, ultimately, Rush offers, the goal is to make the present more compelling than distractions. In his chapter on “Illusions,” for example, Rush prescribes both “company and exercise.” He goes on to recommend “constant employment” as the best remedy for “hopeless love” or unfulfilled “sexual appetite.” And Rush also prescribes “employment” as the antidote to anxiety about death. Here he offers the unexpected diagnosis: “fear, like vice, is the offspring of idleness.” To summarize: stimulants, exercise, noisy company, and employment are Rush’s remedies for illness (bloodletting aside). In fact, “ambition” is Rush’s preferred prescription for “unsuccessful love.” And ultimately this shows that Rush’s hugely influential model of “mind” was only “healthy” when it was linked to productive engagement with its immediate surroundings. Or, in Rush’s words: what’s needed is “employment, or business of some kind” because “man,” it turns out “was made to be active.”

Here “reverie,” as I’ve mentioned, becomes the “absence of mind,” despite the fact that it obviously involves some sort of thinking. (This is the source of the idea of “absent mindedness”). One can actually somehow lose one’s mind while thinking about “absent subjects.” So this “mind” is explicitly decoupled from thought. It only exists with a kind of attention we might describe as “intentionality” or “mindfulness.” The leading symptom of “reverie,” in turn, is a failure to be adequately directed towards—and responsive to—the task at hand. And this focus on something that is not physically present is what places reverie on a continuum with catalepsy, or the abrupt and trance-like loss of both sensation and intentional motion. Ultimately the link between these “diseases of the mind” is a lack of responsiveness to immediate surroundings.

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11 The cause of reverie, in short, is not being adequately responsive to the task at hand. Rush, Medical Inquiries and Observations, 116-117, 307-315, 326.
Melville engages with this model in passages as prominent as *Moby-Dick*’s first paragraphs, or the frequently-discussed conclusion of his chapter on “The Mast-Head.” These moments offer “absent-minded” men plunged in their “deepest reveries”—or “fixed in ocean reveries.” And Ishmael, turn, becomes an “absent-minded youth” amidst “vacant, unconscious reverie,” unable to spot whales.12 (His relationship to “employment,” of course, is also questionable. Like Ahab, Ishmael never actually seems concerned with the “Nantucket market” as a cause more important than his epistemological and ontological concerns).13 These descriptions of reverie—of course—are, to some degree, distinct from discussions of somnambulism. But Rush repeatedly links these “diseases,” most notably when he unites “The Causes of Sleep and Dreams, and Somnambulism” together in one chapter. Rush frames these states as inextricable exactly because they are each prompted by a loss of “mind”—and a concomitant loss of both the feeling of sense impressions and control over bodily reactions. And here I will outline Rush’s account of these states before turning to a detailed reading of Melville’s engagement with dreams, reveries, and somnambulism.

“Sleep affords the same repose to sensation and thought, or to the nerves and brain, that rest does to motion, or to the muscles,” Rush explains, even adding that we might consider “sleep” not just a “disease” but a “tendency to death.” After all, both states are “characterized by a loss of consciousness and motion.” Or, more eloquently, during sleep “every sense” is ultimately “insensible to its customary impressions.” “The countenance indicates neither thought nor passion, and the whole body is reduced in the scale of existence, to the level of…a stream of water.” “Where is that will, and where are those passions, that diffused their influence through every feature of the face, and every muscle of the body,” Rush asks, before offering an answer: “they are all in a state of complete annihilation, as if they had never existed, or were never to exist again.” Sleep is, Rush goes on to explain, is a “partial death.”14


Dreaming, in turn, is a low grade of delirium. And somnambulism is nothing but “a higher grade of the same disease.” Both are described as “transient paroxysm[s],” or sudden attacks, which include muscular action outside the purview of “mind” and erroneous trains of thought. These states, as I’ve mentioned, share a number of characteristics, like a lack of awareness. And not surprisingly, they also share the same cures. But most importantly, these connected states all ultimately have the same cause: “irregular action in the blood-vessels of the brain.” This common root of disease means that “lower forms” can easily “become the cause of more serious diseases in the brain.” So dreams can lead to somnambulism, which can, in turn, prompt madness.

Melville repeatedly pairs somnambulism with dreaming in ways that frame both states as “diseased.” In fact, his first reference to somnambulism arrives when Redburn—at the end of a disastrous and “Mysterious Night in London”—“did not sleep; but, like a somnambulist, only dozed now and then; starting from [his] dreams.” Mardi takes us to Melville’s “Isle of Nods,” which explicitly pairs dreamers, hypochondriacs, [and] somnambulists” as troubled inhabitants. And those figures seek “oblivion for the past” they attempt to escape by taking sudden naps. When Pierre is first “seized” by Isabel’s face, he “surrendered himself” to an obsession in ways that build the same connection: “I believe I was dreaming—sleep-walking,” he tells us. And by the time Delano casts Benito Cereno as behaving “like some somnambulist,” his behavior is almost immediately reconfigured “as one in a dream.” Last but certainly not least, Ishmael projects onto the way that the waves ebb and flow, deriving “restlessness” from their tossing like “drowned dreams, somnambulisms, [and] reveries.”

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15 Dreams can be cured by exercise, labor, a glass of wine, or a dose of opium. The same is true for sleepwalking, along with one stunningly practical solution: a tub of water placed right by the bed. Rush, Lectures on the Mind, 390; Rush, Medical Inquiries and Observations, 300, 302.

16 Rush, Medical Inquiries and Observations, 298, 302. 300; Rush, Lectures on the Mind, 257.

17 Melville, Redburn, 236.

18 Melville, Mardi, 265.

19 Melville, Pierre, 48

20 Melville, Moby-Dick, 482.
What sets the examples in *Pierre*, “Benito Cereno” and *Moby-Dick* apart is the degree to which they borrow from Benjamin Rush. Pierre, for example, is “seized,” or possessed, by what Rush would describe as an “absent subject”: his all-pervasive obsession with Isabelle’s face (i.e. “the face—the face, that wrought upon him”). His mother presses for answers about his clear change in behavior. And his response doesn’t just link dreaming and sleepwalking. He blurs the two together as part of the same type: “I believe I was dreaming—sleep-walking, or something of that sort.” Then he specifically frames this ambiguous state—just how “diseased” was he? Sleep? Dreams? Somnambulism? Or Monomania?—in terms of exactly the kind of aimless loss of direction that Rush saw as a symptom of an “absent mind.” “Never before,” Pierre tells us, “have I so completely gone wandering in my soul.” Pierre even outlines his own situation as a sort of medical case, offering his mother an uncharacteristically assertive account: “‘the only treatment for such a case of harmless temporary aberration, is for all persons to ignore it in the subject.” Here Pierre notably inhabits the persona of a doctor discussing a “temporary” “case,” using a distanced, “playful” or mocking, pseudo-objective tone to acknowledges that his “cure” is ultimately self-serving—at the same time that his medical frame betrays that on some level Pierre imagines his situation in terms of its medical properties.21

By “Benito Cereno,” Melville’s Captain Delano compares Don Benito to a “somnambulist” who “vacantly stared” when he was jolted from his altered state. He is, more specifically, seen, externally, as being “like some somnambulist.” The story’s narrator develops this, framing his behavior—like but not of a somnambulist—as broken, obscure, and “as one in a dream.” Here metaphor may lead to metaphor (i.e. like some somnambulist, as one in a dream), but both labels attempt to place Don Benito on Rush’s continuum from sleep to catalepsy. And while these labels might not exactly be accurate, Benito Cereno represents himself (at least according to Melville’s

almost-reliable, free-indirect narrator), “regretting his momentary absence of mind.” Clearly the reminder of Melville’s story gives us a way to make sense of “the Spaniard’s” behavior. What seems like the inexplicable startling of a somnambulist turns out to be a much milder form of the “absence of mind.” But these two states are intentionally framed as looking remarkably similar from the outside. And Don Benito’s very understandable reasons for being “distracted” on the San Dominick don’t negate the fact that he suffers from an absent mind. In thinking about Babo or threats to his life, he is clearly not focused on the task at hand—and he performs accordingly. (This is certainly another Melvillean ship that fails to meet its economic ends).

It may seem too exaggerated to interpret these readings of Benito Cereno in terms of Benjamin Rush. But Delano’s description of the Spaniard behaving “like some somnambulist” follows directly from a conclusion that he “seemed the involuntary victim of mental disorder,” which Delano imagined as a sort of somnambulism, or “slumbering dominion.” These perceptions of both slumber and “mental disorder” are what lead Delano to ask Don Benito to “favor him with the whole story.” And that request is what, we’re told, led Benito Cereno to “falter” “like some somnambulist,” who eventually showed a different level of related dis-ease and distress. (“Disease,” we should remember, for Rush, is potentially transient lack of ease). This “somnambulism” passage draws on Rush’s language directly, first with another reference to the “absence of mind” and then with an explicit description of Don Benito’s vacant stare. (This harkens back to a moment in Rush’s Medical Inquiries: “absence of occupation is not rest” because “a mind quite vacant is a mind distress’d”). And, finally, Don Benito’s deposition ends with an account that he is “broken in body and mind—and headed to the Hospital de Sacerdotes.25

22 Melville, The Piazza Tales and Other Prose, 55.
23 In short, just because Don Benito wasn’t actually a somnambulist doesn’t mean that he wasn’t suffering from a related “disease of the mind.” Melville, The Piazza Tales and Other Prose, 53-55.
24 Rush, Medical Inquiries and Observations, 117
25 Melville, The Piazza Tales and Other Prose, 114.
This brings us, of course, to *Moby-Dick*—and to Captain Ahab. Ishmael, as I’ve discussed, is also framed as “absent-minded,” in a state of “reverie,” and specifically not engaged in anything resembling economically productive employment. He also directly references the experience the narrator casts in this light—staring off into the waves in an unproductive manner—in terms of “drowned dreams, somnambulisms, [and] reveries.” So to whatever degree “Ishmael” is a character, he seems to have some conception of his potential diagnosis.26

That being said, Ahab is clearly Melville’s most memorable somnambulist. And with Ahab, not surprisingly, Melville famously pairs reverie, dreams, and somnambulism in “The Chart.” “Often, when forced from his hammock by exhausting and intolerably vivid dreams,” we learn, there were two different creatures framed as “Ahab.” The first was a “scheming, unappeasedly steadfast hunter” with a “characterizing mind.” But the second was, “for the time but a vacated thing, a formless somnambulistic being.” This pairing of somnambulism and the idea of being “vacant” is the same pairing we encounter in “Benito Cereno.” And that state is prompted by Ahab’s muttering and repeatedly wondering—“have I not tallied the whale?”—and then “throw[ing] himself back in reveries.” (Ahab also often “walked the deck” in “rolling reveries”). In short, as with Rush’s discussion of “lower forms” as “the cause of more serious diseases,” Ahab’s somnambulism is framed in terms of a clear escalation from reverie to dreams and then somnambulism.27 So while Ahab is repeatedly read as a “monster,” my suggestion, instead, is that when we also need to consider his mental and medical condition.

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27 Jennifer Fleissner and Jonathan Schroder are at both at work on medical readings of Ahab’s famous monomania. *Rethinking Ahab: Melville and the Materialist Turn* (forthcoming). Their readings will supplement my work by discussing the roots of that famous turn. But they also differ because they focus, almost entirely, on French psychiatry—ignoring the clear resonance between Rush’s theories and Melville’s language.
This medical reading stands in dramatic contrast to other interpretations of this passage. C.L.R. James tells us, for example, that “sometimes late at night Ahab's madness seemed to overpower him. He would rise and rush out of his cabin,” James offers, before explicitly shifting the register of his reading away from the medical in just one sentence: “but this is no madness that any doctor can cure.” Here James trades in the medical for a different sort of frame. “What rushed out,” he tells us, was Ahab’s “common humanity,” “flying from the monster that had overcome it.” James had clear reasons for decoupling his reading from the history of medicine in 1953. He wanted to advance a critique against the “monsters” who had challenged—and who were still challenging—the idea of a basic human dignity that James saw recognized in Melville’s work. But in the aftermath of the bomb, James seems to have included anything related to science. In fact, James continues by developing this binary between “humanity” and “abstract science”: “humanity would go and there would remain only abstract intellect, abstract science, [and] abstract technology… serving no human purpose but merely the abstract purpose itself.

In short, for James Ahab was the “embodiment of the totalitarian type” exactly because of his obsession with “science,” or the instrumental “management of things.” James even uses this ground to compare Ahab to Hitler, casting both figures as shaped by “mechanization through science and industry… carried to its logical extremity” exactly because of his obsession with and mastery of “science,” or the instrumental “management of things.”28 So this passage, in turn, offered an Ahab—a “vacated,” “formless somnambulistic being”—who had to be a “monster.”

Denis Donoghue follows James’ lead in an account of “Moby-Dick After September 11th.” He focuses on the fact that Ahab’s “mind” took on “a kind of independent being,” or “lived by its own fire” while his “body fled horror-stricken from the unbidden and unfathered birth.” And here Donoghue turns to James directly: “‘what rushed out, in C.L.R. James’ terms, was ‘the common humanity flying from the monster that had overcome it.'” In the midst of this reading, Donoghue

acknowledges and rejects the possibility of a medical reading, not with James’ explicit dismissal (i.e. “this is no madness that any doctor can cure”) but by offering and then artfully dodging the pseudo-medical language of dissociation: “in Ahab,” he tells us, “soul and mind, in other people normally one, were dissociated from each other.” But after a brief summary of the construction of this divide, Donoghue justifies a decision to look past Melville’s discussion of the mind and soul with a surprising turn to Melville’s style. Melville, Donoghue explains, “sends us lurching from one opaque word to another without letting us divine what these words mean: agent, principle, soul, mind, being, vitality, and spirit,” or forcing words to do more than they possibly can.29

My claim, conversely, is that turning to accounts of Ahab’s medical and ontological condition helps us discover an “Ahab” who seems very different from James’ totalitarian monster or Donoghue’s exercise in style.30 Instead, following Rush and other “scientists,” very broadly construed, we find a character shaped by subtle agencies, fighting his “common vitality,” and suffering from an “absence of mind.”31 Here it seems appropriate to turn to the beginning of Melville’s remarkable but notoriously enigmatic passage directly:

Often, when forced from his hammock by exhausting and intolerably vivid dreams of the night, which, resuming his own intense thoughts through the day, carried them on amid a clashing of phrensesies, and whirled them round and round and round in his blazing brain, till the very throbbing of his life-spot became insufferable anguish; and when, as was sometimes the case, these spiritual throes in him heaved his being up from its base, and a chasm seemed opening in him, from which forked flames and lightnings shot up… a wild cry would be heard through the ship; and with glaring eyes Ahab would burst from his

30 Samuel Otter offers a far more persuasive account of Melville’s language here when he describes this passage as “a scene of eloquent vehemence, only partially explained by what precedes it.” Then Otter offers his own short description of the passage as “a spectacular image of the self ablaze, fleeing from and devouring itself.” Here Otter privileges Prometheus, who he imagines as “tortured” not “by Zeus but by his own consuming thoughts.” And on this account Ahab’s determination does “escalate” in his sleep, assuming “an independence” that “flies from the will” leaving Ahab’s body “vacant.” For Otter the real object of interest is Ahab’s “formlessness” as a “sommambulistic being,” which is a concept I’ll return to. But while Otter turns to T.J. Clark and allusions to Brown, Milton, and Shelley, I turn—not surprisingly—to Rush and, eventually, to accounts of “formlessness” that are based in organic chemistry. “Reading Moby-Dick,” in The New Cambridge Companion to Herman Melville, ed. Robert Levine (New York: Cambridge University Press, 2013). 78-9.
state room, as though escaping from a bed that was on fire. Yet these, perhaps, instead of being the unsuppressable symptoms of some latent weakness, or fright at his own resolve, were but the plainest tokens of its intensity. For, at such times, crazy Ahab, the scheming, unappeasedly steadfast hunter of the white whale; this Ahab that had gone to his hammock, was not the agent that so caused him to burst from it in horror again. The latter was the eternal, living principle or soul in him; and in sleep, being for the time dissociated from the characterizing mind, which at other times employed it for its outer vehicle or agent, it spontaneously sought escape from the scorching contiguity of the frantic thing, of which, for the time, it was no longer an integral.\textsuperscript{32}

In this passage we find a description of two “Ahab”s.” And the most striking aspect of this reading is that the “crazy Ahab” is not a reference to the Ahab with the “glaring eyes.” Instead the “Ahab” framed as “crazy” is the one that initially went to his hammock—or the one who was awake. This Ahab, of course, was an “unappeasedly steadfast hunter,” unwavering as he consistently pursued his white whale. And this raises a central question, which Rush helps us sort out: how was this Ahab “crazy” if his will was so strong? Ishmael addresses this directly when he tells us that Ahab’s “glaring eyes” were by no means “unsuppressable symptoms of some latent weakness.” Instead they were actually “the plainest tokens of its intensity.” This “steadfast” Ahab, it seems, was shaped by his strong will. But he suffered from conflicts linked to the degree to which his “characterizing mind” pulled him away from the present moment.

Here Ahab’s mind is contrasted with a second “Ahab,” or an “eternal, living principle or soul.” This was “the agent that so caused him to burst from [his hammock] in horror.” And this Ahab, it seems, was escaping the “characterizing mind” that possessed and otherwise “employed” his mind as “its outer vehicle or agent,” day and night. Instead this second Ahab—sleeping Ahab—“sought escape” from the “contiguity of the frantic thing” of which he was finally “no longer an integral.” That is to say: this second “Ahab” worked to escape contact with the chaotic “creature” he escaped in sleep—and its “whirling” and “clashing of phrensies.” No longer “an integral,” sleeping Ahab wasn’t contained by a particular function, or “employed” and controlled by his

\textsuperscript{32} Melville, Moby-Dick, 201-202.
“characterizing mind.” Instead he was one with the “living principle” in him that “sought escape” from the “intolerably vivid dreams” that somehow intensified the first Ahab’s obsession.

We might begin to seriously interpret this passage by turning to Benjamin Rush—or to the link between “dreams” and “reverie”—united by Rush’s account of the “absence of mind.” Here in his waking moments, Ahab’s “mind” still seems “diseased,” not by way of “inactivity” but because of “the stimulus of ideas of absent subjects” so powerful that he was unable to focus on “present objects”33 (He is, after all, monomaniacally fixated on a painfully absent white whale). My claim, to be clear, is that turning to Rush’s model of mind presents a very different, textually grounded way of making sense of the “Ahab” that “burst from his state room” in “The Chart.” That Ahab, as I’ve explained, went to his hammock still haunted by “exhausting and intolerably vivid dreams of the night.”34 And those dreams actually “resumed” Ahab’s “intense thoughts” from the day, extending their duration as they “carried them on amid a clashing of phrenses”: wild ideas often linked to temporary insanity. Like colliding atoms these “wild ideas” “whirled” “round and round” in Ahab’s “blazing brain,” like “small chips” in Moby-Dick’s final vortex. And we can make sense of the surprisingly “vivid” nature of these dreams—and their spatial “whirling”—in terms of Rush’s Lockean or materialist depiction of ideas as a different sort of material entity, formed by absent “sense impressions.”

These dreams or impressions also notably follow exactly the moment where we find Ahab obsessively muttering, “have I not tallied the whale?” and “pouring over is charts till” “he would throw himself back in reveries” “long after midnight.” Ishmael portrays him worrying, on loop: “tallied him, and shall he escape?” So Ahab was “consumed” with one “revengeful desire.” But in this moment of Ahab’s “reveries” we also learn that his “mad mind” was in a “breathless race”

33 Rush, Medical Inquiries and Observations, 308.
34 This connection between dreams and being “haunted” may seem anachronistically drawn from contemporary psychoanalytic discourse, but in Pierre Melville connects haunting to somnambulism, when he offers: “I believe I was dreaming—sleep-walking, or something of that sort” just before we learn that “the face haunted him,” which is a clear motif. Melville, Pierre, 48.
until he attempted to balance himself in the “open air” on deck. This also seems to point to Rush, who pairs “open air” with exercise as the cure for hypochondriasis: a pattern Melville follows. And this passage concludes with “reverie” developing into “somnambulism.” Here Melville tells us: “the spirit that glared out of bodily eyes,” that “seemed” to be “Ahab” was “a vacated thing” and a “somnambulistic being.”36 The workings of this account of “somnambulism” are admittedly unclear, as Jonathan Arac and others have acknowledged.37 But Melville’s repeated use of language that directly matches Rush’s theories is strong evidence that he engaged with Rush, directly or indirectly.38 And as Branka Arsić intuits but doesn’t fully develop, turning to Rush adds something to our reading.39 In fact, it helps us locate an “Ahab” who gives way not to James’ “monstrosity” but to “disease” and this “absence of mind.”

What matters most for this reading, of course, is that with his turn to somnambulism Melville offers an “Ahab” who can function without the control of his “characterizing mind.” That “formless” figure is specifically “a vacated thing.”40 And yet, Melville, explains, its “mind” could not exist unless it were leagued with the “soul.” So the “characterizing mind” that is resisted by

35 Rush, Medical Inquiries and Observations, 102, 118. When Mardi takes us to Melville’s “Isle of Nods,” for example, he explicitly pairs dreamers, hypochondriacs, [and] somnambulists.” Melville, Mardi, 265.

36 Rush even tells a story of a young man who also “seemed to have two distinct minds, which acted by turns independently of each other,” and not “a simple consciousness.” This story considers his different modes of being during “fits,” but in offering this account, Rush also explains that “the motions in the somnambulists...appear indeed as if they depend upon two minds; but they may be explained, by supposing they were derived from preternatural or excessive motions in different parts of the brain, inhabited by one and the same mind.” Here Rush explains: “before we proceed to mention the uses of sleep, let us pause and contemplate the human body, deserted as it were by its soul, in a state of profound or perfect sleep; in which state I have said, even dreaming does not take place.” Rush, Benjamin. Lectures on the Mind. Philadelphia: American Philosophical Society, 1981: 669-673.

37 Arac even points out that the lack of clarity in this passage prompted an editorial emendation in the Northwestern-Newberry edition of the text, which he analyzes and questions. Jonathan Arac, “‘A Romantic Book’: Moby-Dick and Novel Agency,” Boundary 2 17, no. 2 (July 1, 1990): 48, 52.

38 Rush, Medical Inquiries and Observations, 102, 118.

39 Branka Arsić discusses Rush briefly, explaining in a note that Rush “introduced into nineteenth-century American psychiatry a set of concepts and ideas that by the mid-nineteenth century has become so widespread that they were not only in medical books and treatises but ‘in the air.’” Branka Arsić, Passive Constitutions, or, 7½ Times Bartleby (Stanford University Press, 2007), 176.

40 I will return to the importance of “formlessness” in the third segment of this chapter, but for a powerful discussion of formlessness in “The Chart” see Samuel Otter, “Reading Moby-Dick,” 69, 78-82.
the stronger “living principle,” “soul,” or “common vitality” is allegedly inextricable from it. And somehow in the process of “yielding up all his thoughts and fancies to his one supreme purpose” Ahab’s “inveteracy of will,” or his persistence, produced “a kind of self-assumed, independent being of its own.”

“The Chart” clearly concludes with an account of this emergence: “God help thee, old man, thy thoughts have created a creature in thee; and he whose intense thinking thus makes him a Prometheus; a vulture feeds upon that heart for ever; that vulture the very creature he creates.” This may be ominous, problematic, and ultimately unclear. But Ishmael is clearly at pains to suggest that somehow Ahab’s obsessive thoughts have actually “created” a “creature.” This conclusion of “The Chart” serves as the culmination of our introduction to Ahab. And it simultaneously offers both sides of Melville’s engagement with Rush’s material model of mind: erasing its status as something immaterial, only to reinscribe it as an as-yet-conceptualized and ontologically baffling new kind of material creation.

41 Robert Talley offers an equally helpful reading of “The Chart”: “the actual agent, the supposedly vengeful thing, is not Ahab or even the ‘living principle or soul’ within him; it is rather that purpose, ‘by its sheer inveteracy of will,’ which is its own ‘independent being.’” And this purpose, “cannot in fact be revenge, for its origins lie in an ‘unbidden and unfathered birth.’” “Contrary to the arguments that assume for Ahab a pure or unregulated individualism, this phrase indicates that neither Ahab, nor the white whale, nor anyone else… has called this “independent being” into being; it is unbidden and unfathered, causa sui.” Robert Talley, Melville, Mapping and Globalization: Literary Cartography in the American Baroque Writer (Continuum, 2011), 47.

42 Arac offers an especially helpful reminder that “The Chart” culminates the expository sequence begun in ‘The Quarter-Deck,’ in which Ahab's quest for vengeance is unveiled and its significance meditated, before "The Affidavit" begins to introduce the action sequences of whaling that make up most of ‘what there may be of a narrative in this book.’” Arac, “Moby-Dick and Novel Agency,” 47.

43 Another possible influence is what James Chandler describes as the “vehicular hypothesis.” Chandler reminds us that Hobbes' Leviathan—clearly an influence for Melville—“relied exclusively on the motions and contact actions of bodies for its explanations of all change.” (In addition to 122 uses of the word “Leviathan,” the “Opening sentence of Hobbes’s Leviathan” is the source of one of Melville’s first “Extracts.”) He offers: “by art is created that great Leviathan, called a Commonwealth or State—(in Latin, Civitas) which is but an artificial man.”) But Henry More, conversely, offered a “concession to the new mechanistic materialism” that was more fitting for the Cambridge Platonists: “while the soul was distinct from the body, it was nonetheless housed or ‘carried’ in a highly subtilized form of matter that registered perceptual vibration and effected locomotion.” “It was,” More continues, “the human junction box, so to speak, between motion in and motion out.” “This subtilized body”—which obviously resonates with my discussion of Melville’s “subtle agencies” in my first chapter—was something More described as the soul’s “‘vehicle.’” In fact, this “vehicle” at least seemed to be “the soul’s primary medium, her innermost casing, [and] her second nature,” which “survived the death of the gross body.” If we read in terms of More’s account we find that souls should be considered as “invested immediately with that tenuous [sic] matter which is her inward vehicle.” And “upon their separation from terrestrial bodies” these souls “transmigrate into a Subtiler Corporeality,” which outlived the body and encased the soul. Chandler, James. An
Ahab famously describes this sort of emergent “personality” in “The Candles” when he declares: “I own thy speechless, placeless power; but to the last gasp of my earthquake life will dispute its unconditional, unintegral mastery in me. *In the midst of the personified impersonal, a personality stands here.*”\(^{44}\) Here Ahab’s “earthquake life” brings him back into alignment with what he describes as the “impersonal,” or the kinds of slow, imperceptible geological forces I have discussed as shaping Melville’s characters.\(^{45}\) But as we see in “The Chart,” he breaks from the “common vitality” or “living principle” that might constitute the “personified impersonal.” Instead, he insists, that amidst the impersonal an identity or “a personality stands here.”

In making this claim to be a “personality” amidst the “impersonal,” Ahab directly disputes the idea that anything might have “unintegral mastery” of him. This framing of external pressures as “unintegral” also returns us to “The Chart,” when Ahab breaks from the “common vitality,” specifically creating a creature that was “no longer an integral.”\(^{46}\) And this word “integral” also appears in *Mardi*, when Yoomy is described as a “somnambulist” “buried in a reverie.” Here Babbalanja responds: “do our dreams come from below, and not from the skies? Are we angels, or dogs? Oh, Man, Man, Man! thou art harder to solve, than the Integral Calculus—yet plain as a primer... soul and body glued together, firm as atom to atom, seamless as the vestment without

\(^{44}\) Melville, *Moby-Dick*, 507.

\(^{45}\) For a detailed reading of Melville and the idea of the “impersonal” see Sharon Cameron, “Lines of Stones” in *Impersonality: Seven Essays* (University of Chicago Press, 2007).

\(^{46}\) Jonathan Arac offers a wonderful reading of the idea that the soul is “no longer an integral.” He explains: “‘integral’ ‘would ordinarily mean that the soul has been fractured and has lost its wholeness, but the relation of meaning to grammar in the word ‘integral’ is peculiar. As a substantive, it regularly means a "whole"; as an adjective, it means a "constituent," a piece necessary to form a whole. So we say ‘an integral part,’ not meaning a whole part, but a part of a whole.’ Here Arac turns to “a seventeenth-century sense of ‘integral,’ which clearly references “part” and not “whole,” concluding that this must be Melville’s meaning. “As with a Homeric hero,” he explains, “when the soul has fled, all that is left is a dead body. But Ahab still lives; therefore his ‘will’ must have ‘forced itself,’ or forged itself, a ‘being of its own,’ now ‘independent’ of the soul. Arac, *Moby-Dick and Novel Agency*, 51-2. Arac’s reading of an “integral” as a part is also compatible with “unconditional, unintegral mastery.”
joint, warp or woof.” 47 The reminder of this chapter will take on Babbalanja’s questions, especially what it might mean to come “from below”: from the earth, if not from atoms.

47 Melville, Mardi, 267, 433.
“Venice”

Melville’s “Venice” begins by explaining that “with Pantheist energy of will, “the little craftsman of the Coral Sea” “up-builds” a marvelous gallery, “evincing what a worm can do.” This “marvelous gallery”—compared to humans’ own work to build palaces in Venice—takes us to one of Melville’s frequent references: a long-standing suggestion that coral was generated by small insects, who slowly built up structures—entire continents included—with the shells of their own bodies. These tiny creatures were “ceaseless agents of assemblage, signifying,” Timothy Marr recently argued, “the unthinking forces of material creation.” In fact, Marr goes on to suggest that Melville emphasizes a kind of material construction, or “vernal sense,” that operates at the expense of both humans and their Christian faith (or, at least, its orthodox forms).

We certainly see a challenge to both human exceptionalism and Christian doctrine in “Venice.” In fact, the short poem offers:

> With Pantheist energy of will  
> The little craftsman of the Coral Sea  
> Strenuous in the blue abyss,  
> Up-builds his marvelous gallery  
> And long arcade,  
> Erections freaked with many a fringe  
> Of marble garlandry,  
> Evincing what a worm can do.

> Laborious in a shallower wave,  
> Advanced in kindred art,  
> A prouder agent proved Pan’s might  
> When Venice rose in reefs of palaces.

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48 Melville, Herman, Robert C. Ryan, and Hershel Parker. *Published Poems: The Writings of Herman Melville* (Evanston: Northwestern University Press, 2009), 291. Melville’s revisions are detailed on 817.

49 Marr explains that “Melville regularly engaged the changing forms of earth’s material reality by moving beyond scriptural notions of redemption and damnation to center on matter’s immanent capacity to generate continuing life in the midst of the fatal embrace of earthly destruction.” And here he turns to coral, which resists the “fluid and unfathomable abyss of the ocean that embodied matter’s cannibalistic power to devour human lives.” “Melville’s Planetary Compass.” In *The New Cambridge* ed. Robert Levine, 195-7.
Here we meet the “little craftsman” that—in *Typee, Omoo, and Moby-Dick*—Melville describes as “God-omnipresent” “coral insects.”⁵⁰ We find him amidst what, it seems, is a coral island’s “blue lagoon.” And we find that his work is as “strenuous” as any human engaged in “kindred” creation or construction. For Melville this creature—who we might, following Elleray, describe as a “little builder”—produces not just coral but a “marvelous gallery” and a “long arcade.”⁵¹ In fact, his “erections” include long passages and arches, streaked with ornaments and flowers: ostensibly the realm of the cultural—and of the human. This insect constructs his art, specifically, with “Pantheist energy.” And yet, like humans, this minute coral insect also demonstrates both “agency” and “will.” If the first verse of “Venice” celebrates and “up-builds” the coral insect, the second lowers the human, initially introduced as “laborious” only in “a shallower wave.” From that initial slight, Melville goes on to offer at least some degree of connection between humans and these creatures, whose “kinship” at least extends to their construction of an “art.” Then we return to pantheism: “Pan’s might” is also somehow “proved” by the dehumanized “agent” who made Venice. And while the coral insect is given a stunning amount of power with his strenuous “up-building,” when Melville turns to humans we’re simply told that “Venice rose.” This passive construction unavoidably highlights Melville’s posthumanist suggestion that human creations are like what insects build since both are shaped by “Pan.”⁵² And Melville concludes his juxtaposition with rising “reefs of palaces,” drawing on “kinship” to “evince” what another creature can do.


Melville’s work in “Venice” does not stand alone. Instead we find Melville’s pairing of “coral” and “galleries” as early as Omoo, when in the midst of a blue lagoon “Typee” found himself dreaming of “endless grottoes and galleries,” “far below” “the mariner’s lead” (i.e. in another “marvelous gallery” below humans’ “shallower wave”). These “galleries” are explicitly framed as “coral cells.”53 And Melville even goes on to develop his idea of “reefs of palaces” near the conclusion of Omoo. When Typee approaches the palace grounds, we discover a pier of “hewn” or cut “coral rocks.”54 This pairing of coral and galleries returns in Melville’s next novel, Mardi, when we’re introduced to “the cells and galleries” of a “wall of coral.”55 And Mardi makes its status as a source for “Venice” clear. At least, at the start of its penultimate chapter Taji approaches a cavern and finds himself stunned: “from rocky roof to bubbling floor, it was columned with stalactites; and galleried all round, in spiral tiers, with sparkling, coral ledges.” “All Venice,” he continues, “seemed within.”56

It’s clear that Melville repeatedly pairs coral, galleries, and “Venice” in ways that challenge the idea of human exceptionalism. The ornate garlandry of churches and palaces becomes paired with these arcades and galleries made by coral.57 And this comparison resonates compellingly with work by François Pyrard de Laval, the first explorer to create a dual sense of “the mystique

53 Melville, Omoo, 64.
54 Melville, Omoo, 162-3; 286.
56 Melville, Mardi, 650.
57 These prefigurations of Melville’s use of coral in “Venice” also directly challenge orthodox Christianity in ways that relate to what we see with “Pan.” In Omoo, for example, three chapters after the palace, Melville offers that “one of the best-constructed and handsomest chapels in the South Seas,” he tells us—just “like the buildings of the palace”—“stands upon an artificial pier,” “built of hewn blocks of coral.” And when coral insects’ cavernous palace prompts Taji to stand in awe, Melville offers, without much subtlety: “it seemed three brief nights and days, ere we paused before the mouth of the cavern.” As we see with the insects in “The Apple-Tree Table,” Taji waited for resurrection. And what he found was coral. Finally, in Moby-Dick in the chapter on the “Pacific,” Ishmael explains that amidst “coral isles” in the “mysterious divine Pacific zones” we find “the tide-beating heart of the earth.” And “lifted by those eternal swells, you needs must own the seductive god, bowing your head to Pan.” Melville, Omoo, 297; Melville, Mardi, 650; Herman Melville et al., Moby-Dick; Or, The Whale (Northwestern University Press, 1988), 483.
and dangers of coral reefs” in 1619. In fact, his transformative account was that “it is admirable to behold how each of these [Atolls] are [e]nvironed around with a huge ledge of rocks with no human construction whatever.”**58** Darwin found that “the Pyramids and other great ruins” seemed “insignificant” when compared to “these mountains of stone accumulated by the agency of various minute and tender animals!” And in “Venice” Melville poignantly captures the tension Laval and Darwin deftly locate. Both authors celebrate the remarkable vitality of the “insect”—and challenge the status of work produced by “prouder” human “agents” working in their “shallower wave.” That may be the reason *Omoo’s* protagonist, Typee, explains that on the brink of extinction he frequently heard aged Tahitians chant in low sad tones:

*The palm tree shall grow  
The coral shall spread  
But man shall cease*59

The “world without us” will “grow” and “spread” and be verdant and vibrant.60 And Melville ends his longest novel with exactly this focus on living, imminent *generativity*: the growth of coral and not the related loss of human forms of life. Just after he discovers the incredible coral “Venice” Hautia tells Taji: “‘join hands, and I will take thee, where they Past shall be forgotten; where though wilt soon learn to love the living, not the dead.’”61

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58 This portion of Laval’s observation was contentious enough that it was omitted in translation. James Bowen, *The Coral Reef Era: From Discovery to Decline: A History of Scientific Investigation from 1600 to the Anthropocene Epoch* (Springer, 2015), 3.


60 Here I mean to reference Alan Weisman’s compelling portrayal of what the world would look like after the disappearance of humans in *The World Without Us* (New York: Picador/Thomas Dunne Books/St. Martin’s Press, 2008). Marr also makes this connection between “Venice,” the concern with extinction in *Omoo*, and Weisman, helpfully also noting that Melville dedicates “twice as many lines to the accretive materialism of the polyp than to the human accomplishments of civilization.” Marr, “Melville’s Planetary Compass,” 197.

A Brief History of “Coral Insects”

Coral was at the center of scientific debates throughout the 1840s. And for most readers coral reefs were also exotic, unfathomable curiosities. Darwin’s first monograph, after all, was titled *The Structure and Distribution of Coral Reefs* (1842). And coral is the sole subject of four of the last fifteen entries of Darwin’s *Journal and Remarks* (1839): a travel narrative eventually published as *The Voyage of the Beagle*. James Dwight Dana’s work on reefs also contributed to both science and discovery, since his theories were developed during his time as the geologist of the famous and transformative United States South Seas Exploring Expedition (1838-1842). And Melville seems to have shared this dual scientific and anthropological interest. In fact, his own fictionalized travel narrative, *Typee* (1846) was tellingly marketed alongside Darwin’s *Beagle* as part of John Murray III’s rather imperial “Home and Colonial Library.”

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65 Before his time as the geologist for the US Ex. Ex. Dana was the student and eventual son-in-law of Benjamin Silliman, the founder of *The American Journal of Science*, who helped mentor Joseph Henry. And after producing transformative catalogues of zoophytes and extending Darwin’s work he was considered a “celebrity in the world of marine science,” Dana’s *Structure and Classification of Zoophytes* was released in 1844, but his most famous book was *On Coral Reefs and Islands* (New York: G.P. Putnam, 1853). Bowen, *The Coral Reef Era*, 49-51. Melville clearly engaged with the expedition, which happened at the same time he was sailing. We know, for example, that he purchased Wilkes’ *Narrative* for a “very expensive” $21 in 1847. Parker, Hershel. *Herman Melville: A Biography*. (Baltimore: JHU Press, 2005), 499. He cites it extensively in *Moby-Dick*’s “The Chart.” Otter, “Reading Moby-Dick,” 73. And Barbara Keating adds that in addition to growing up in the “same neighborhood” as expedition leader Wilkes, “Melville knew the expedition geologist James Dana.” Keating, Barbara H. “Contributions of the 1838-1842 U.S. Exploring Expedition.” In *Geology and Offshore Mineral Resources of the Central Pacific Basin*, edited by Barbara H. Keating and Barrie R. Bolton. Springer Science, 2012, 3. Melville’s lifelong friend Robert Tomes was also a member of the expedition.

66 John Murray III published the second edition of Darwin’s *Journal of Researches* (1845) in his “Home and Colonial Library” just before *Typee* (1846) and *Omoo* (1847) became part of the same series.
Typee opens as Melville’s protagonist Tommo sets sail for the Marquesas. And in listing his “haunted” and “strangely jumbled anticipations,” “coral reefs” have a stunning place next to "tattooed Chiefs" and naked virgins (or, more precisely, “naked houris”). Coral insects go on to play notable roles in *Omoo, Mardi, Moby-Dick, and Pierre.* And coral consistently serves this role as a dual exotic and scientific object—or “creature”—of fascination, which seems to have become Melville’s way of simultaneously suggesting and displacing another model of creation. In short, Melville’s clear interest in exotic coral seems to have been a central inspiration for his structural, generative model of life. After all, in *Moby-Dick* Melville famously describes “God-omnipresent coral insects, that out of the firmament of waters heaved their colossal orbs.” And this account of “God’s foot upon the treadle of the loom” is by no means isolated. Eighteen chapters later coral islands are specifically located at the “tide beating heart of the earth.” By *Pierre*—like “Venice”—this logic of material production even applies to humans. Melville offers that Pierre perceived “that most grand productions of the best human intellects ever are built round a circle, as atolls (i.e. the primitive coral islets which, raising themselves in the depths of profoundest seas, rise funnel-like to the surface.)” But this move to link coral to a logic of what we now call “emergence” has a long and storied history, which I will briefly rehearse here.

In his discussion of the “Origin and Structure of Coral Reefs” James Bowen explains that in the 17th century economic power was obviously dependent “on command of the high seas.” It became “fashionable” for travellers to record and publish descriptions of their “Voyages” and “travels.” And coral, in this moment, was often a source of material for the discussion of close calls and dangerous encounters. By the 1760s voyages like James Cook’s *Adventure*—which

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67 This group “sometimes called the Coral Islands,” Melville adds, was “perhaps the most remarkable and interesting in the Pacific.” Melville, *Typee*, 5.

68 Coral also appears in “Benito Cereno” “Temple Second,” *The Confidence-Man, and Clarel*, which is to say: it is surprisingly prevalent in Melville’s fiction and his poetry, or for his entire adult career.


visited Melville’s beloved Tahiti in 1769—carried naturalists who might help them “occupy and colonize that still unknown, unmapped part of the globe.” This became standard, and naturalists, “like their commanders, were instructed to collect any evidence that would contribute to a better understanding of global geology, and particularly coral reefs.” The goal was to simultaneously solve the problem of coral’s impediment to colonialism and to chart dangerous waters.71

Amidst this work to make waters safe for travel, naturalists and investors began to ask the question: what makes coral? Discussions of its calcified structure made by a sort of “worm” emerged as early as Imperato’s work in 1599. By 1726 Peyssonnel believed “he had correctly determined the animal nature of the coral-forming organism and that reefs were limestone structures created by ‘insects’ living in large colonies. And in 1767 John Ellis decided to give order and clarity to “zoophytes,” producing a complete catalog and ultimately concluding that coral’s calcified exterior was inextricable from the “living body” of polyps, who “construct their own cells,” secreting limestone from their tissues. Finally, by the end of the 18th century, “investigation into the major problems of reef formation and the nature of coral ‘insects’ had advanced considerably.’” There was “general agreement that reefs were created in some mysterious way by animals.” The open question, not surprisingly, was how to account for the “inexplicable processes by which miniscule zoophytes barely three or four mm wide were able to construct such vast reefs and atolls across all of the tropic oceans.”72

This question led navigators and naturalists to scrutinize reefs during their voyages at the start of the nineteenth century. By 1832 Lyell offered that the “new rock-formation continually in progress” was “most conspicuously displayed in the labors of the coral animals,” which he called “zoophytes of the oceans.” Lyell, not surprisingly, surmised that coral atolls “are built by an infinitely slow process on the summits of submerged volcanoes on the ocean floor” by “madrepores,” or stony corals, which “form the first foundation.” Those corals, Lyell thought,

built a “platform upon which other species may build.” But their platform, in turn, was made by volcanoes, which were produced not by great catastrophes but by successive slow eruptions.”

Several objections to Lyell’s theory emerged, and he fielded many of them in advance. For example, Lyell added that there was no reason to consider the substantial amount of time that would be required for these structures to be created, “on the ground of the slowness of the operations of lithogenous polyps.” These microorganisms that secrete stony deposits at what may seem to be a glacial pace had centuries to work. A more significant objection was that coral polyps could live only in 100 to 200 feet of water. But here, as I hinted, Lyell explained that coral and lava worked together. The summits of subterranean volcanoes were gradually elevated by earthquakes, and eventually the base was high enough to enable “polyp growth.” Finally, “one significant feature still needed explanation.” Lyell wasn’t sure how to account for the fact that Oceania could be studded with so many “minute islands,” when none were wider than Tahiti.

Darwin responded with what came to be known as subsidence theory. In short, when volcanoes become extinct, their land can sink. And coral polyps inhabit their peaks as soon as they reach an appropriate depth. In Darwin’s own words: “as land with the attached reefs subsides very gradually from the action of subterranean causes, the coral-building polypi soon raise again their solid masses to the level of the water.”

Lyell embraced and endorsed Darwin’s theory,

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74 Lyell adds: "the reefs increase as fast as is compatible with the thriving state of the organic beings which chiefly contribute to their formation; and if the rate of augmentation thus implied be called, in conformity to our ordinary ideas of time, gradual and slow, it does not diminish, in the least degree, the geological importance of such calcareous masses," eventually suggesting that coral may require "3000 years to produce a reef 15 feet thick," but we have no ground for presuming that they won't be successful, or that "the hour of the dissolution of our planet will first arrive, as the earlier geologists were fain to anticipate." Here he turns from "the brief annals of human events" to "the volcanic isles," which he describes as "natural chronometers." Lyell, Principles of Geology, 296.


76 Bowen, The Coral Reef Era, 38; Lyell, Principles of Geology, 296.

77 This model also helped Darwin explain marine findings in the mountains of Chile and Peru. As a
incorporating it into his revised 1840 edition of *Principles of Geology*. And together their work "initiated a century of controversy from the basic uniformitarian assumption that the crust of earth has always been in continuous, mostly imperceptible, oscillation."78

On the model offered by Darwin and Lyell, these imperceptible oscillations were not only the kind of “Material Circulation” that I detailed in my first chapter. Instead this is a model of slow, imperceptible material accrual. It is also the context for imagining a new model of creativity, where coral served as a “first foundation.” And this kind of model is at the heart of both uniformitarian theory and Darwin’s approach to coral. For Lyell, as I mentioned, the new formations that are “continually in progress” were “most conspicuously displayed in the labors of the coral animals.” And for Darwin ancient ruins seem “utterly insignificant” when compared to the “mountains of stone accumulated by the agency of various minute and tender animals!”

Here Darwin very specifically explains that “every single atom, from the least particle to the largest fragment of rock… bears the stamp of having been subjected to organic arrangement.”79

And Melville encountered this sentiment, if not in *The Structure and Distribution of Coral Reefs*, then in his groundbreaking *Journal of Researches*, which Melville purchased in 1847—though he discovered the text on the USS *United States* in 1843.80 In short, “Emergence Coral” was always a “boundary organism,” which means it pressured the boundary of “living” and “unliving.”81 But when we turn to Darwin and Lyell we begin to find a moment when coral became the basis or


foundation of an ontology that reached beyond the reef.

Coral also loomed large in the popular imagination throughout the nineteenth century. Michelle Elleray captures the ways that this new logic resonated as a “cultural fable” in her essay “Little Builders: Coral Insects, Missionary Culture, and the Victorian Child.” And for her, “the coral insect captured the Victorian imagination as the epitome of industriousness, reflecting contemporary belief in the value of labor and production.” Elleray turns to texts like an essay on “Coral Rings” (1853) that declares: “for the most colossal specimens of industry we are indebted to one of the least promising of animated things.” And ultimately he outlines this “cultural fable” of the “coral insect” as “the narrative of a humble being small and insignificant in itself,” who—like a child—“is able to produce a result disproportionate to its size” “by working collectively.”

It’s easy to imagine that in Melville’s moment this narrative had developed beyond insects who emerged from the depths of the ocean, especially in this context of work by Darwin and Lyell. In fact, in an essay on “The Islands of the Pacific” in 1852 James Dunwoody Brownson offered a sense that this idea was already a myth: “it was long supposed that this production of the enterprising and indefatigable coral insect had its foundation in the unknown and unfathomable depths of the ocean; and surmises have even been made that this industrious race are widely engaged through the whole of Polynesia in their silent labors,” waiting to “startle the old world by the sudden completion of a new, vast continent.” “But now,” Brownson explained, “without any disparagement whatever of the industry of the insect builder” that Elleray describes, “it may well be doubted whether their labors begin at any very great depth below the water surface.” Even if the myth of “little builders” who build continents from the bottom of the ocean was challenged by Darwin and Lyell, the sense of the power of “coral insects” certainly remained. In fact, Brownson

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adds: “it may be easily conceived” that Hawaii “has been the theatre” of “volcanic action,” such that “cones” near the surface were “pitched upon” by “insect workers” until “islands formed.”

We also find accounts that mix developments by Darwin with the myth of “little builders” from the bottom of the sea. For example, in “Coral Islands and Their Architects,” written for the Royal Institution in 1875, George Allman explains that coral insects were constantly “urged” by “unerring instinct” to construct islands across the Pacific and Indian oceans. His story begins with the coral insect myth. But Allman also continues by following Darwin, offering an account that as those islands become heavy they sink into the cold, dark, “ungenial” depths of the sea. This was supposedly “incompatible with the well-being of the polyps,” who were carried down slowly, still working as “builders” until they “inevitably parish[ed].” In short, Allman imagined coral insects who were already present as their islands sank. In an unintentional antidote to the “little builders” narrative, these coral insects, urged by “instinct,” created the structures that plunged them to their deaths. (Cruel Optimism for insects). And in place of Ishmael’s concluding, “And I only am escaped alone to tell thee;” for Allman “there was nothing else to tell the tale.”

Finally, we see discussions of coral insects in “literary” work by a wide variety of authors. Marr references Lydia Sigourney’s “The Coral Insect” (1827). Poe offers a full blown account of the coral insect myth in “The Black Cat: Instinct versus Reason” (1840): “Of this lofty species of instinct the coral-worm affords a remarkable instance. This little creature, the architect of continents, is not only capable of building ramparts against the sea, with a precision of purpose, and scientific adaptation and arrangement… but is gifted with what humanity does not possess—with the absolute spirit of prophecy.” And Ballantyne’s The Coral Island (1857) was a

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83 James Dunwoody Brownson, “The Islands of the Pacific: The Hawaiian Cluster,” De Bow’s Southern and Western Review 13, no. 5 (November 1852), 460-1.

84 For the beautiful theory which is now universally accepted,” Allman adds, “we are indebted to Mr. Darwin.” Allman, George. “On Coral Islands and Their Architects.” In Notices of the Proceedings at the Meetings of the Members of the Royal Institution of Great Britain. (London: The Institution, 1875), 63-65.

85 Marr, “Melville’s Planetary Compass,” 197.

bestseller that portrays a wise “native” teacher who explains that there are “various opinions” on how “coral islands” are formed, ultimately concluding that “coral insects” attract lime to their bodies, which they use to build cells. Following Darwin, the teacher explains that coral insects “choose the summit of a volcano, or the top of a submarine mountain,” and “they never work at any great depth below the surface.” But they still build islands. Ultimately these “little builders” continued to be referenced into the twentieth century. And “coral insects” were clearly of interest across both “literature” and “science” during the eleven years at the heart of Melville’s career.

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Little Builders and Melville’s Logic of Emergence

In “Science and the Earth” Bruce Harvey imagines that Melville is skeptical about these heated debates about geological process. In Harvey’s mind Melville “implicitly mocks scientific bickering” and “satirizes geological theorizing,” even offering a series of parodies of the “squabble” between uniformitarians and catastrophists. Harvey begins by turning to Melville’s discussion of coral insects in Typee: “The origin of the island of Nukuheva cannot be imputed to the coral insect; for indefatigable as that wonderful creature is, it would be hardly muscular enough to pile rocks one upon the other more than three thousand feet above the level of the sea.” But this doesn’t actually reject the idea of “little builders.” And it doesn’t reject Darwin. Instead Melville’s challenge simply pressures the idea that coral insects constructed three thousand foot mountains. Melville makes this point more directly in Omoo when he explains that the “Coral Islands” are “mostly small, low, and level; sometimes wooded, but always covered with verdure.” He tells us: “the origin of [this] entire group is generally ascribed to the coral insect.” Melville alludes to this distinction again in Moby-Dick when he describes “coral isles” and “low-lying” archipelagos. And he speaks to this divide between low “coral islands” and volcanic “lofty mountain summits” explicitly in his lecture on “The South Seas.”

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88 Here Harvey is by no means alone. Alex Calder, for example, responds to this passage with the deeply problematic: “delicious as that thought is, it corrects a theory no one ever entertained.” Harvey, Bruce A. “Science and the Earth.” In A Companion to Herman Melville, edited by Wyn Kelley. Wiley, 2008, 73-75; Alex Calder, “Blubber: Melville’s Bad Writing,” in Melville and Aesthetics, ed. Geoffrey Sanborn and Samuel Otter (New York: Palgrave Macmillan, 2011), 21.

89 Melville, Typee, 155.

90 Melville, Omoo, 62.

91 Melville, Moby-Dick, 483.

92 In his 1858 lecture Melville offers: “It is an erroneous idea to picture the islands of the Pacific as low tracts, barely rising above the surface.” In fact, while “there are a few coral islands of this character; but for the most part they present a bold shore of rocky cliffs” and “lofty mountain summits, which stand as gigantic chimney stacks to give vent to internal fires of the earth, to whose force they owe their existence.”
Here it seems likely that Melville draws on James Cook, whose storied 1769 trip to Tahiti and his famous *Journals* would make him an almost obligatory source for Melville. Following his encounter with “the Labyrinth” now known as the Great Barrier Reef, Cook became aware of “the increasingly feasible supposition” among naturalists “that in some mysterious way coral reefs were the production of microscopically small ‘insects.’” But in 1774 he posed the question: “‘If these Coral rockes were first formed in the Sea by animals, how came they thrown up, to such a height?’” This certainly resembles Tommo’s question about piling rocks “3000 feet above the level of the sea.” And Johann Reinhold Forster, the naturalist on Cook’s expedition, offers an answer that resembles what we see in Melville’s work: coral isles are low isles. At least Forster explains, in his “Theory of the Formation of Isles,” that the “organized bodies” or “animalcules forming the reefs,” “want to shelter their habitation from the impetuosity of the winds, and the power and rage of the ocean.” Winds tend to blow from one direction, so “by instinct” corals construct a “ledge” or “screen.” This work, Forster continued, “seems to me the most probably cause of THE ORIGIN of all THE TROPICAL LOW ISLES, over the whole South-sea.”

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93 As John Bryant and a multitude of other scholars have discussed, we know that Melville borrowed from a number of relevant sources in *Typee*. John Bryant, *Melville Unfolding: Sexuality, Politics, and the Versions of Typee: a Fluid-text Analysis, with an Edition of the Typee Manuscript* (University of Michigan Press, 2008), 18, 32, 212, 239. Cook’s *The Voyages of Captain James Cook* was even republished in 1846, he tellingly brought a native Tahitian named Omai on one portion of his journey, and we also know that Melville borrowed from Cook’s accounts of cannibalism—or at least he engaged with it at a moment that, in Otter's words, "firsthand experience of anthropophagism is rare," but "stories feed upon stories." Samuel Otter, *Melville’s Anatomies* (Berkeley: University of California Press, 1999), 12. And in notes to her edition of *Omoo*, Mary K. Bercaw Edwards suggests that Melville follows Cook in adding the “O” at the beginning of the name of “Otoo.” *Omoo* (Penguin, 2007). For more on Melville drawing on Cook see Tyrus Hillway, "Melville and Nineteenth-Century Science," Yale University, 1944, 15, 31n, 136.


Melville also seems to have engaged with work by Darwin, which he purchased and read. For Darwin these coral insects and their “insignificant coral-islets stand and are victorious” against powerful waves. In fact, “the agency” of these “minute and tender animals” is stronger than an “island” built of the hardest rock.” They are more likely to survive, Darwin offers, because of “another power”: the strength of “organic forces.” “Let the hurricane tear up its thousand huge fragments,” Darwin offers, “yet what will that tell against the accumulated labor of myriads of architects at work night and day, month after month?” “Through the agency of the vital laws” we find these little “polyps” “conquering” the “mechanical power” of the ocean. Here it is difficult to not think of Moby-Dick’s concluding scenes, as “a sullen white surf beat against its steep sides; then all collapsed, and the great shroud of the sea rolled on as it rolled five thousand years ago,” ultimately permitting “no records.” And, of course, my first chapter concludes with a detailed account of the ways the “vortex” at end of Moby-Dick resembles a “hurricane” that seems to “tear up its thousand huge fragments” only to be recomposed. For Darwin we still have “the accumulated labor of myriads of architects,” and for Melville “the coral shall spread” even after humans “cease.” But in both cases vitality—specifically configured as growth—reliably endures.

Melville’s account of coral insects in Omoo seems to be a rehearsal of Moby-Dick’s famous “weaver gods.” As I mentioned this text explains that the “Coral Islands,” “covered with verdure” have an “origin” that is generally ascribed to the coral insect. But this passage actually continues:

According to some naturalists, this wonderful little creature, commencing its erections at the bottom of the sea, after the lapse of centuries, carries them up to the surface, where its labours cease. Here, the inequalities of the coral collect all floating bodies; forming, after a time, a soil, in which the seeds carried thither by birds germinate, and cover the whole with vegetation. Here and there, all over this archipelago, numberless naked, detached

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97 Darwin, Journal and Remarks, 548.
98 Melville, Moby-Dick, 572, 13.
99 Melville, Omoo, 192.
coral formations are seen, just emerging, as it were from the ocean. These would appear to be islands in the very process of creation—at any rate, one involuntarily concludes so, on beholding them.100

This passage does two incredibly important things. First, it shows that Melville understands and appreciates the power of the “coral insect myth” as such. After all, he points out that according to “some naturalists” these “little builders” do actually build reefs from the bottom of the ocean. Here Melville offers us a narrator—viewing things directly—who sees “coral formations” specifically “emerging” as if they were “from the ocean.” And “these would appear,” he tells us, “to be islands in the very process of creation.” Even so, by hedging with “some naturalists” Melville creates distance, enabling him to draw on the power of this myth without contradicting Darwin, whose Journal of Researches was often advertised with Melville’s as part of Murray’s prestigious “Home and Colonial Library.”101

This passage also extends the “coral insect myth,” directly linking coral’s growth to the germination of seeds—and to the verdant world that we discover in so much of Melville’s work. This reference to birds that “germinate” and cover the whole island with “vegetation” is clearly linked to reproduction. (Coral “erections,” it turns out, continue with the help of soil and germanous seeds). And for Melville this is a clear pattern. The narrator “The Tartarus of Maids, for example, is a “seedsman” traveling to a paper mill to buy “envelopes.” And Melville also famously writes that Hawthorne had “dropped germinous seeds into [his] soul.”102 Here even Melville’s tense is generative. After all, instead of turning towards seemingly final “coral reefs,” Melville references the perpetual process of “coral formation.”

100 Melville, Omoo, 62-63.
101 John Murray III’s “Home and Colonial Library was, in Hershel Parker’s words, “more than a mere title.” The books sold together and separately home and abroad, so this gave Melville remarkable access to packaging and advertising, also creating respect for Melville by listing him alongside well-known writers like Darwin and Lyell. Parker, Herman Melville, 509. Typee was Volume 15, Omoo was Volume 22, and Darwin’s Journal of Researches was Volume 12. For a detailed account see Angus Fraser, “John Murray’s Colonial and Home Library,” The Papers of the Bibliographical Society of America 91, (1997): 339–408.
102 Herman Melville, Piazza Tales, 324. Also see forthcoming work on the erotics of this text—where the paper is made of recycled lingerie—by Jonathan Senchyne, along with discussions of Melville’s interest in germination in Marr, “Melville’s Planetary Compass,” 197-199.
This understanding of the coral insect myth—paired with germination and vegetation—certainly continues in one of the most memorable scenes in *Moby-Dick*: the incredible moment when “Pip saw the multitudinous, *God-omnipresent, coral insects*, that out of the firmament of waters heaved [their] colossal orbs.” And in that act of supposedly watching these “little builders” somehow lift comparatively enormous shells from their own bodies, Melville’s Ishmael makes the daring claim that Pip “saw God’s foot upon the treadle of the loom.” Put another way: Pip saw the machine that put the world in *motion*. And he saw the source behind it. Last but certainly not least, this material source of what we might call “life” was paired with the inextricable production of the “*shapes of the unwarped primal world*.” His vision, I will argue, was paired with a “loom” and with “material factories” because Pip saw the creation of visible and *living forms*, which my next section will frame as the heart of new theories of *organization.*

Nine chapters later Melville returns to this remarkable idea of “weaver-gods.” Here Ishmael explains that “the industrious earth” produced a “gorgeous carpet” of flowers and “unwearied verdure.” And this explosion of plant life was surrounding the skeleton of a fossilizing whale. Melville concludes this account with a declaration that—as with coral insects’ discarded shells—decomposition is *inextricable from growth*: “Life folded Death,” “And Death trellised Life,” which means it structurally supported the growth of “Life.” Here “life” converted decaying components—which provided a skeleton that allowed things to *grow*. This change happened, specifically, because of the work of the “great sun”—a clear reference to the exchange of oxygen and carbon: a relatively new discovery that was a central way into reimagining the connections between animals and plants. And here—as with Pip seeing the production of “*shapes*”—the triumph of these “weavers” was to send “*figures*” “*floating forth*,” or “curly headed glories.”

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103 For a related, compelling reading of Pip “dead while alive”—and able to interrupt “the crew’s network of personal, economic, political, and historical relationships” when he returns to the surface—see Donald Pease, “Pip, *Moby-Dick*, Melville’s Governmentality,” *Novel* 45, no. 3 (September 21, 2012): 327–42.

104 For a description of this exchange, now known as the “carbon cycle,” see Steven Johnson, *The Invention of Air: A Story Of Science, Faith, Revolution, And The Birth Of America* (Penguin, 2008). For the
As I suggested in my introduction to this section Melville imagines coral as connected to the “tide-beating heartbeat of the earth,” which frames it as generative, automatic, and primal. Like “God’s foot upon the treadle of the loom” in *Moby-Dick* or *Omoo’s* “wonderful little creature, commencing its erections at the bottom of the sea,” Melville shows us a series of “coral formations” “just emerging as it were from the ocean.” And like the coral insect myth, these often “appear to be islands in the very process of creation.” In *Moby-Dick*, for example, a swamped craft “seemed a coral boat grown up to us from the bottom of the ocean.” By *Pierre*, in the scene where human cognition is like atolls, Melville describes “primitive coral islets” that somehow “rais[e] themselves in the depths of profoundest seas.” And this logic is developed in detail in *Mardi*, which describes a “coral grove” had “roots” that “laid hold of the foundations of the deep” before moving on to an extended meditation.

This is, of course, not accurate, which is surprising from an author whose reading is seen as “remarkable” and “up to date.” As Elizabeth Foster carefully tracks, “Melville read, if not the real thing, then derivatives of Lyell and Owen and probably Darwin,” which he knew in detail. But Foster reminds us that two of Melville’s geological references are “pure error.” And this belief that “coral islands and atolls are built up from the bottom of the ocean” is the first one.

As *Mardi* develops, Melville even shows, directly, that he knows the more current model. Media asks Babbalanja, the philosopher, “Can your sapience tell the origin of all the isles?” And Babbalanja responds: “the coral wall which circumscribes the isles but continues upward

connection between decay and growth, see Justus von Liebig, one of the founders of organic chemistry, who explains: “while no part of an organized being can serve as food to vegetables, until, by the process of putrefaction and decay, it has assumed the form of inorganic matter.” Justus von Liebig, *Animal Chemistry: Or Chemistry in Its Applications to Physiology and Pathology*. Taylor & Walton, 1848: 2.

108 Melville, *Mardi*, 188.
the deep buried crater of the primal chaos.’” But “‘in the first times’” volcanic fires thickened and dropped “‘heavy sediment’” to “‘the bottom; which layer on layer concreted, and at length, in crusts, rose toward the surface.’”110 Some readers consider this in the context of catastrophe, by way of debates between eighteenth century debates between Plutonists, who imagined that the earth had an igneous origin, and Neptunists, who imagined an aqueous origin.111 But this argument subsided after Lyell built on Hutton’s foundations to transform geology. And as Foster suggests, “layer upon layer” of rising crusts doesn’t actually seem to reference a catastrophe. In fact, Lyell explains that active volcanoes are only “brief catastrophic events,” which serve as “transitory epiphenomena on the continuing elevation and subsidence of the earth’s crust.”112

And ultimately Babbalanja’s argument seems to resemble Lyell’s work to blend the work of volcanoes and coral, along with Darwin’s insight about mountains and fossils. In fact here Babbalanja continues: “then the vast volcano burst; rent the whole mass; upthrew the ancient rocks; which now in divers mountain tops tell tales of what existed ere Mardi was completely fashioned. Hence many fossils on the hills.”113 This turn to fossils also draws out one of the major tenets of Lyell and Darwin’s theory: as volcanoes cause land to sink and coral reefs start to form, there is compensation. So sinking volcanoes caused the earth’s crust to be pushed up to form the Andes, which explained marine findings in the mountains of Chile and Peru.114

Here Media cries, “‘preposterous,’” so Babbalanja offers him a second origin story. (“Then take another theory,” he continues). This story isn’t about coral, but it is still very definitely about “primal chaos” and organization. He calls it “the celebrated sandwich System,” explaining:

110 Melville, Mardi, 417.

111 See, for example, Hillway, “Melville and Nineteenth-Century Science,” 121-122, 128; Harvey “Science and the Earth,” 74. Elizabeth Foster more carefully explains that “Melville perhaps was parodying here the rival Plutonian and Neptunian theories, which had been the subject of lengthy and heated controversy at the end of the eighteenth and well into the nineteenth century.” But Foster very intentionally hedges, reserving certainty for discussion of Melville’s engagement with Lyell. Foster, “Melville and Geology,” 45, 52.


113 Melville, Mardi, 417.

“Nature's first condition was a soup, wherein the agglomerating solids formed granitic dumplings, which, wearing down, deposited the primal stratum made up of series, sandwiching strange shapes of mollusks, and zoophytes; then snails” until ultimately “the substantials came.” Here Hillway imagines the Neptunian hypothesis. Foster responds with skepticism, explaining that “Babbalanja's second or ‘soup’ theory is so incomplete” that one cannot determine its exact ancestry.” But amidst their surprisingly heated debate about Melville’s sources, it seems clear that this passage supports the idea of “emergence” that I’ve worked to develop.

The connection between Babbalanja's second model and the idea of “emergence” is that it references the “strange shapes” that we saw with Pip at the moment of their creation. Then it builds in terms of what we might consider levels of complexity of organization. After all, Melville moves from “soup” to “agglomerating solids” to “granitic dumplings,” which eventually “deposited the primal stratum.” This geological thinking was certainly of interest to Melville, three years later, in Pierre: “far as any geologist has yet gone down into the world, it is found to consist of nothing but surface stratified on surface. To its axis, the world being nothing but superinduced superficies.” But, second, this model isn’t only about layers. Instead it builds in terms of what we might describe as levels of complexity. Here Melville moves from mollusks and zoophytes on to “the substantials”: fish and mosses are followed by crocodiles and alligators, then walruses and cows, and finally birds and humans, “all sandwiched right over all that went before.” Of course on some level Melville is discussing fossils. But this is also a creation myth that seems to think about the ways these beings were somehow built from one another. Media certainly seems to agree. At least he responds: “‘Mohi tells us, that Mardi was made in six days; but you, Babbalanja, have built it up from the bottom in less than six minutes.’” (“Built it up from the bottom,” indeed). In fact, Babbalanja replies, “‘nothing for us geologists, my lord.’”

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116 Mohi is the group’s historian. Melville, Mardi, 417.
Interestingly enough, this “sandwich model,” or the idea of “surface stratified on surface,” is the second error that Foster identifies. She describes it as an “absurd onion-theory of the earth.” But as Foster helpfully points out, “any book which yielded him the data for the sandwich passage would almost certainly have corrected this fallacious idea.” Foster even suggests that in the face of Melville’s two “errors,” he clung to his more poetic picture.

But I would like to extend Foster’s line of argument. In making these two atypically egregious errors—coral insects and this “onion theory”—we find exactly the place where we have to pay careful attention. Melville felt strongly enough about these two ideas to stray from his more current source texts. This seems to have been a philosophical investment—not only an aesthetic one.

“Then take another theory,” Babbalanja offers after the coral myth seems “preposterous.” And here I’m interested not in how these two theories conflict but in what they share. Both seem to suggest a worldview shaped around generative development. Whether tiny coral insects build continents or “strange shapes” become “substantials,” we deal with a pattern where “invisible agencies” become “agglomerating solids” that become something more.

We have already seen the way that “strange shapes” play a role for Pip, who is pulled down to the “wondrous depths, where strange shapes of the unwarped primal world” glide “before his passive eyes.” Here in Mardi’s “primal chaos” Pip’s “unwarped primal world” seems like the “soup” that gives way to Mardi’s “agglomerating solids.” This is where Pip sees “God's foot upon the treadle of the loom.” This is where he encounters “God-omnipresent, coral insects.” And this is where Melville’s “weavers” produce their “strange shapes” from the “firmament of waters”—sending “figures” “floating forth,” if not giving birth to “curly headed glories.”

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119 Here Melville uses the word “begat,” clearly referencing sexual reproduction. Moby-Dick, 414, 450.
We see a similar pattern in *Omoo* when Typee offers an account of “endless grottoes and galleries” of coral that were “far below the reach of the mariner's lead.” Here he explicitly declares: “What strange shapes were lurking there!” And if we have any doubts that this is Melville’s “primal” world of “soup” or “invisible agencies,” developing into “visible objects,” he continues by describing “coral plants of every hue and shape,” “sprouting with flinty bulbs.” Here, again, we find not plants or animals but more “strange shapes”: “some bristling with spikes, others clad in shining coats of mail, and here and there, round forms all spangled with eyes.” These clearly prefigure the “strange shapes” that Babbalanja describes when he outlines the “sandwich System.” Meanwhile in the midst of Typee’s related coral lagoon—the site of generation, where Melville imagines these objects are constructed—“no living thing was seen.” (The “unwarped primal world” indeed).

The links between Babbalanja’s two models of the emergence of organization—coral and chemistry—seem especially connected in these moments where coral insects inhabit the same space as Melville’s primal world. But there are certainly other accounts of the work of these “strange shapes” throughout Melville’s work. In fact, when Hautia tells Taji she will take him to a place where his “Past shall be forgotten”—where he will “soon learn to love the living, not the dead”—she proposes to take him “deep diving” to show him “strange things.” This logic is even more explicit when Babbalanja describes “life” as “one thing and the same” for both “kings” and in “mollusks.” Here Babbalanja continues by describing work by “the Philosopher Dumdi,” which frames “life” as “a certain febrile vibration of organic parts, operating upon the vis inertia of unorganized matter.” And in this chapter’s final sections I will turn towards what, exactly, this idea of “organization” entails.

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120 Melville, *Omoo*, 162.
121 Melville, *Omoo*, 64.
One of the more puzzling historical facts about *Moby-Dick* is that it was written in a moment that whale oil was becoming obsolete. Whale oil’s production peaked in 1845, when 720 ships brought in 17 million gallons of oil. Whaling was the fifth-largest industry in the United States. And oil from whales sold for $1.50 a gallon. But by 1851—the year *Moby-Dick* was published—only 10 million gallons of oil were brought in. And even with a rapidly shrinking supply, their price had plummeted to 45 cents per gallon.\(^\text{124}\)

The question, of course, is what prompted this change. In 1843 *The Nantucket Inquirer* reported: “Great noise is made by many of the newspapers and thousands of the traders in the country about Lard oil, Chemical oil, Camphene oil, and a half-dozen other luminous humbugs” before adding that “oil mania” shouldn’t lead to “indulgence” in such fantastic “dreams.”\(^\text{125}\) But by 1846 Abraham Gesner distilled “kerosene,” or “illuminating oil,” from coal, bitumen, and shale. And by 1854 his “liquid hydrocarbon” plant produced 5000 gallons of new oil every day.\(^\text{126}\)

Often this narrative gives way to the “whale oil myth,” or the idea that just after Edwin Drake pumped the first petrol in in 1859, the market naturally transitioned from whale oil to petroleum.\(^\text{127}\) But as I’ve hinted this story is far more complex. In fact, during the late 1840s and


\(^{126}\) This is only one example. In fact, in 1847 James Young began to distill a series of different kinds of oil with similar effects. And by 1855 Joseph Henry’s correspondent at Yale, Benjamin Silliman, realized, in turn, that since both coal and oil were “carbon-rich fossil materials,” oil would also yield kerosene when it was distilled and purified. *Shell Shock: The Secrets and Spin of an Oil Giant*. Edinburgh: Mainstream Publishing, 2005; Marrin, Albert. *Black Gold: The Story of Oil in Our Lives*. Random House, 2012.

\(^{127}\) For more on the “whale oil myth” see Koverik’s “Thar she blows! The whale oil myth surfaces again,” *The Daily Climate*, March 3, 2014. [http://www.dailyclimate.org/tdc-newsroom/2014/03/whale-oil-myth](http://www.dailyclimate.org/tdc-newsroom/2014/03/whale-oil-myth). Koverik’s focus is on pushing back against this myth as a source for fantasies linked to the power of the “free market,” but the way he pushes readers to look more carefully at the compelling history of the decline
50s Camphene—a synthetic composite of turpentine and alcohol—was the best-selling lamp fuel in the U.S. by a significant margin. And hydrogen gas, derived from coal, “expanded dramatically” in the early 1850s, even reaching New Bedford—a final holdout—in 1853. In short, whaling’s extraordinarily rapid decline wasn’t the result of someone “finding oil.” Instead—in addition to resource exhaustion—the change was caused by chemistry. And whale oil was replaced by a series of distilled, refined, and even synthesized new compounds.

When Melville was a student in the 1830s “chemistry” was a developing science that dealt exclusively with inorganic material, like minerals and metals. This included “air,” which it’s important to realize wasn’t formally “discovered” until 1775. But anything dealing with “life” was seen as part of a separate arena: “plant and animal chemistry,” which was still very much a natural history. What this means, at its most compressed, is that the practice was ultimately about the identification, extraction, and distillation of material from “living” natural bodies—along with anything linked to their “economies,” like digestion and breathing.

Lewis Beck, who gave evening chemistry lectures for the Albany Academy—where Melville was enrolled—wrote, for example, in the textbook students would have used, about extracting

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substances like spermaceti from various cavities of whales. Here Beck offers a helpful example of plant and animal chemistry:

Spermaceti oil is obtained from an oily matter lodged in a bony cavity in the head of the *Physter macrocephalus*, or spermaceti whale. On subjecting the substance of pressure and bags, a quantity of pure limpid oil is expressed; and the residue, after being melted, strained, and washed with a weak solution of potassa, is sold under the name of *Spermaceti*.

It is “an inflammable substance” “of a white color and silvery luster” that is “brittle, soft, and slightly unctuous to the touch; insoluble in water;” and obviously defined by a sort of phenomenological description of its sensible qualities. This mode of chemistry—Beck knew and wrote—was an increasingly outdated model that obsessively described the parts of plants and animals, like what we see with Melville’s Ishmael. But by the time Melville wrote *Moby-Dick* in 1850, it had been almost totally replaced.

Organic matter had been seen as entirely “too complex” for anything like a “building block model” where component parts could be isolated—and organic substances could be artificially produced. Instead it seemed clear that “organic compounds” had to be made by living bodies. In the words of Carl Schorlemmer, the first historian of the new and incredibly rapidly-developing field of “Organic Chemistry”: “it was at that time supposed that the compounds which are found in plants

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131 For more on these “Lectures on Chemistry and Physics,” which resembled Lyceum talks, see “Herman Melville and Joseph Henry at the Albany Academy; or, Melville’s Education in Mathematics and Science,” *Leviathan* 18 no. 2 (2016): 4-28. A recurring advertisement in the *Albany Argus* in 1832 announced: “Lectures on Chemistry—A Public Introductory will be delivered at the Laboratory of the Albany Academy, on Tuesday evening at 7 o’clock. The course will consist of 16 lectures. Terms—For a single ticket $3. Lady and gentleman $5, &c. As no subscription paper will be circulated, those desirous of attending may put down their names at the lecture room.” Here it’s also worth noting that Beck acknowledges “the important assistance” and “useful suggestions” that he received from his brother, T. Romeyn Beck, who was the Principal of the Academy Beck, Lewis Caleb. *A Manual of Chemistry: Containing a Condensed View of the Present State of the Science, with References to More Extensive Treatises, Original Papers, etc.* Webster and Skinner, 1831: iv.


133 Beck offers: “In the descriptions of individual substances, I have studied brevity as far as was consistent, and for that purpose have employed, to a certain extent, the style adopted in Natural History” not because it was cutting-edge but because “more delicate manipulations” “would have increased the size of the work beyond the limits assigned to it.” This seems to have been more about simplicity in his textbook than a commitment to a divide between organic and inorganic substances. In fact, he eventually offers that "animal oils have many properties in common with those derived from the vegetable kingdom, and are probably essentially the same” Beck, *A Manual of Chemistry*: iv, 431.
and animals were produced under the influence of a so-called vital force, and could therefore not be prepared artificially.” In short, to be “organic” was to be derived and not created (by humans).134

Between 1812 and 1840 the field completely changed. Jacob Berzelius persuasively argued that inorganic substances were made of elements that were combined in different proportions, or which were constant across compounds. (For example, water always contained one part hydrogen and two parts oxygen). Then Berzelius “determined the atomic weights of nearly all the elements then known” and designed “a simple and logical system of symbols” (i.e. H, O, Ca, Cl), which made it possible to conceptualize distinct, shifting, exchangeable molecules in terms of formulas like C₆H₁₂O₆ or H₂O. Berzelius’ model is still used today, in a form that’s only slightly modified. (His superscripts became subscripts). And Ursula Klein, a leading historian of chemistry, persuasively argues that we should think of these formulas as “paper tools,” which made it possible for chemists to build models of the constitution of molecules—and to test predicted reactions between the elements that they combined.135

The effect of these utterly transformative formulas cannot be overestimated. In addition to converting “chemistry” into a field that at least resembled what we know today, they helped “extend the chemical order established in inorganic chemistry to the comparatively much more complex and confusing area of organic matter,” which was otherwise described as an “impenetrable jungle.” And they helped “chemistry” become an “experimental science,” increasingly practiced inside labs. When Berzelius proposed his formulas, there were fewer than one hundred identifiable organic substances. But thirty years later, as Melville was writing, there were several thousand—and a flourishing market for artificially produced and refined “synthetic” compounds, like kerosene and gasoline—or pharmaceuticals and dyes.136

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134 For discussion of the standard 1820s argument that “organic compounds” had to be produced by living bodies and were ultimately incapable of being artificially prepared see Schorlemmer, The Rise and Development of Organic Chemistry: 13-16; Gregory, William. A Handbook of Organic Chemistry: 3.


This ability to generate new—and increasingly complex—“organic" material was also conceptually transformative. It became standard to challenge the idea that there were actually any “organic" substances at all—as opposed to a continuum of increasingly complex structural entities. This was stunning—and widely rejected—when the claim was first made by Jean-Baptiste Dumas in 1828, but by 1860 almost everyone agreed: organisms should be grouped not by appearance or behavior but by their constitutive elements. This was the real import of the shift from classification of organic substances in terms of “observable properties” and “natural origins” (i.e. “Plant and Animal Chemistry”) to models based on structure, or their “composition and constitution.” Every compound—mineral to human—was categorized by its assumed and invisible “chemical atoms,” which were derived as part of the development of equally invisible “chemical laws.”

So, to summarize: after 1840 “organic chemistry” was the study of “chemical reactions”—or, more specifically, of the functional, derived “composition and constitution of organic compounds” or “substances,” which had almost no “natural” basis in materials made outside the lab. And at risk of the hyperbolic, this was a moment when every thing changed. Instead of positing a divide between groups like “animals” and “plants”—where substances like coral were portrayed as inhabiting a “boundary”—this model, based on molecular structure, grouped entities in terms of the complexity of organization. And this is ultimately to say: material collections differed by degree but not by kind.

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137 Klein, Paper Tools: 70-78, 131-132. As historian of science Alan Rocke frames it, "the dominating story of chemistry"—which started in the 1830s and took over by the 1860s—"was neither the periodic law nor the search for new elements.” Instead it was the “maturation” “of the 'theory of chemical structure.'" Stripped from the idea of indivisibility that accompanied earlier accounts of “physical atoms,” these “chemical atoms” are each just “packets” of “elemental matter of a certain relative weight.” Alan Rocke, Image and Reality (University of Chicago Press, 2010), xiv, 6. For an impressively detailed account see Alan Rocke, Chemical Atomism in the Nineteenth Century (Ohio State University Press, 1984).


139 This portion of Klein’s story has a long history. In the first history of the field, The Rise and Development of Organic Chemistry: 5 (1879), Carl Schorlemmer—a close friend of Marx and Engels—pointed out that “organic chemistry as a science [had] been created almost entirely during the present century.” Colin Russell, in turn, describes the field’s rapid development as “one of the strangest aspects of the history of science.” “From simple ideas about matter it took much less than two centuries for the emergence of a sophisticated understanding of important and often complex substances,” Russell offers,
Even so, some compounds were still specifically described as “organic.” And here it’s especially important to realize that this didn’t reference a kind of material. Instead it was a process. To be “organic,” after 1840, was to be in motion. This could point to a sort of phase change or visible transition. But it could also reference a perpetual process of chemical fluctuation and exchange, like what came to be known as the “carbon cycle.” In fact, throughout the 1840s and 50s we find reference to “vital chemical changes” or even “vital or chemical phenomena,” as if “vitality” and “chemistry” were somehow ultimately the same. My next goal, in turn, is to explain that to whatever degree chemistry after 1840 was ultimately about the interactions of invisible atoms or elements, it was also about life.

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Justus von Liebig, who did more than anyone to link these new developments in chemistry to agriculture and physiology—and, specifically, to “the circumstances of our own species”—was named, by the Royal Society, the “founder of organic chemistry.” And in engaging with questions about the so-called meaning of “life” or “vitality,” Liebig offers: “In the animal ovum, as well as in the seed of a plant, we recognize a certain remarkable force, the source of growth, or increase in the mass.” In fact, “by the action of external influences”—specifically “impregnation,” or “the presence of air”—these entities “enter into a state of motion or activity.” (This is, of course, the process I’ve identified as “decomposition by addition”). Here nascent plants and animals develop as the result of “external influences,” which make “them” simultaneously tied to factors external to themselves. Or, in Liebig’s words, what we learn from physiology is that “every motion” is ultimately “the result of the transformation of the structure or of its substance.”


The real work of each animal, on Leibig’s model, is to convert “all food into parts of its own structure”—just like plants make use of sunlight.\textsuperscript{141} So while this isn’t the way we’re accustomed to imagine it, for the emergent field of chemistry, “vital force”—or just “vitality”—was seen specifically as this “motion,” “activity,” or a “source of growth,” which "exhibit[ed] itself in the production of a series of forms,” which were ultimately described as “complex.”

This raises a difficult question: what, exactly, does this “complexity” reference? Leibig defines it as something that can’t be reduced to “crystallized minerals,” which have static “geometrical forms.” So on one hand he offers complex, organized systems—or organisms—where we find “the laws of vital motion.” But we also encounter objects without “organization.” They were imagined as crystals, minerals, and “lifeless compounds.” So the work of “vitality” for these early professional chemists was ultimately exactly this “increase of mass”—or a transition that was always framed in terms of growth and expansion, as opposed to loss—which transformed the otherwise “lifeless” and stable “mineral substances” into “organisms” that “endured”—or which remained in existence—“with life.”\textsuperscript{142}

This, of course, still begs the question: for these chemists, what was life? Here Liebig may seem less than helpful when he offers the unfortunate “we shall never know what life is.” But he goes on to offer a more productive alternative: instead we should concern ourselves with the “dynamics of the vital force.” “Life,” for these chemists, is, not surprisingly, a process. If it is said to have any stable “state” it’s just “the state of motion.” But the meaning of “every motion” is—again—deferred: “the result of the transformation of the structure or its substance”\textsuperscript{143}

\textsuperscript{141} Liebig, Animal Chemistry: 89, 95.
\textsuperscript{142} Liebig, Animal Chemistry: 1, 4.
\textsuperscript{143} Liebig, Animal Chemistry: 1, 5, 7.
At the end of the day, these early chemists seem to be a group of early pragmatists, writing in a moment that authors like Emerson receive the same label. Here we can turn to another surprising conceptual construction, where we have “life” exactly because we have “motion”: “In the animal body, in consequence of the transformations and changes undergone by matter previously constituting a part of the organism, certain phenomena of motion and activity are perceived, and these we call life, or vitality.” Here “life” clearly isn’t a state or an object. Instead “life” is a term that makes it possible to consider not form but process: the post hoc “consequence” of “transformation” or “motion” which we “perceive” and then “call life.” In short, we use “life” to try to capture motion, organization, and growth. In Leibig’s terms, instead of being a substance “life” is “the result of the transformation of the structure or its substance.”

Finally, amidst this totally different way of thinking about “organic,” “organized,” “vital,” or “living” organisms, Chemistry was said to have become “increasingly conscious of its true calling”: to “ascertain the metamorphosis of a substance” and “discover the laws of the transformation of compounds.” We find, in short, a powerful account of material that circulates, or motion: “a new and unexpected light has been thrown upon the vital processes of plants and animals.” In fact, “at every expiration and every moment of life,” he explains, elements separate from the animal organism and enter, instead, “into combination with the oxygen of the atmosphere.” These losses, it turns out, go hand-in-hand with gains: “animal life,” is shaped by “a constant supply of certain matters, animal food, and oxygen, in the shape of atmospheric air.” And “during every moment of life, oxygen is absorbed from the atmosphere in the organs of respiration, and the act of breathing can not cease while life continues.”

144 Here what I mean by “pragmatism” is that this structure resembles the post hoc accounts that concern both John Dewey and William James, like James’ famous example that you don’t feel frightened and then run from a bear—instead you run from a bear and then feel “afraid.”

145 Liebig, Animal Chemistry: 5, 89, 95.


To summarize: on Leibig’s model, “life” is this state of motion. Or, as John Draper frames it in work on the organization of plants, “individuals” or “organized beings” are perpetually in the midst of this “incessant change.”¹⁴⁸ And second, these changes seem to always be caused by external “supplies” of air, food, and other matter, such that these “motions” are inseparable from structural reconstitution and growth—much like what I’ve attempted to capture with the idea of “decomposition by addition.”

Melville clearly understands this. In *Moby-Dick*, he offers, for example, that “in life [spermaceti] remains perfectly fluid, yet, upon exposure to the air, after death, it soon begins to concrete; sending forth beautiful crystalline shoots.” (However aesthetically pleasing this crystallized form also marks the end of life).¹⁴⁹ In *Omoo* we learn something similar about coral: “a substance which, although extremely friable, is said to harden by exposure to the atmosphere.”¹⁵⁰ That text goes on to repeatedly consider fossils in terms of crystallization: a seemingly perfect example of “life” turned into solids. The “earth's interior sedimentary strata,” Melville writes, “were crystalized into stone.” And at the “Isle of Fossils” we find “beetles, turtles, ant-eaters…a long procession, frosted and crystalized in stone, and silvered by the moon.”

Melville’s most famous reference to crystallization, of course, is near the start of *Pierre*. There we learn that in America the Past “hath no fixed statues erected to it, but all things irreverently seethe and boil in the vulgar caldron of an everlasting uncrystalizing Present”—exactly because “the democratic element operates as a subtile acid among us; forever producing new things by corroding the old.” A multitude of scholars have offered powerful readings of this passage. Jennifer Greiman, for example, concludes an essay on “Goethe, Melville, and the Color of Democracy” by explaining that the artificial “green in *Pierre*,” or “verdigris,” is “the result of

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processes of [productive] corrosion and decay,” which “erodes the distinction that America seeks to produce between nature and artifice, the old and the new, death and life—and even between America’s history at home and abroad.”¹⁵¹ For Christopher Castiglia it offers “a manifesto on the relationships between families and futurity, sociality and sameness, cosmopolitanism and exceptionalism” which helps “shed disturbing light” on the consequences of institutionalism, anti-Catholicism, and reform in the antebellum State.¹⁵² Paul Gilmore, in his work on electricity, turns to materialism not with atoms but with Marx. He reads this moment as echoing Marx and Engels’ “all that is solid melts into the air.” And for Gilmore this passage “delineates an American society in constant flux, where the social, economic, and political upheavals of the age destabilize any and all individual identities.”¹⁵³ In short, Greiman at least engages with science by describing “corrosion and decay” as “productive.” But Castiglia, Gilmore, and others seem to immediately and problematically figure accounts of natural processes as political metaphors.

My claim, conversely, is that Melville’s references to “crystallization”—and to this “uncrystalizing” or living “present”—are by no means incidental. As I just explained, the “complex forms” with “motion,” “activity,” and “growth” were exactly the ones that cannot be reduced to “crystalized minerals” with their “geometrical forms.” Here Melville draws on the new division, in chemistry, between “motion” and “lifeless compounds.” In short, Melville isn’t only telling us something about “democracy” or “public life.” He is making an explicit point about life. In his words—as this remarkable passage concludes—“the most mighty of nature's laws is this, that out of Death she brings Life.” Or, to turn back to my introduction, decomposition is inextricable from growth.

Chemistry courses through this passage in a multitude of ways. It begins with an account that “the monarchical world very generally imagines” that in “America the sacred Past hath no fixed statues erected to it, but all things irreverently seethe and boil in the vulgar caldron of” the “everlasting uncrystalizing Present” that I have just discussed. This seems especially applicable to the “social condition” since America has “no chartered aristocracy.” And, in fact, he finds that “families rise and burst like bubbles in a vat.” This process happens for reasons that Melville directly links to chemistry: the telling “democratic element operates as a subtile acid among us; forever producing new things by corroding the old.” And this isn’t a casual chemical metaphor. Instead, Melville continues by unpacking the process by which a particular green paint is made, in France, with “vinegar poured on copper plates.”

Melville offers this account of “verdigris” at a moment that marks the total transformation and development of chemicals and dyes. The first synthetic dye was a purple hue produced in 1856, and that dye—as I discussed at the start of this section—helped transform both the commercial world and chemistry. But here we find Melville offering an unexpectedly detailed account of a much older tradition of alchemical production: the development of verdigris. “Nothing,” he continues, “can be more significant of decay than the idea of corrosion.” And “yet, on the other hand, nothing can more vividly suggest luxuriance of life, than the idea of green as a color.” It is, after all, the “peculiar signet of all-fertile Nature herself”—even if, here, it’s clearly “nature” constructed, or artificial. This is exactly the kind of process taking chemistry by storm in 1856. And this is by no means a random allusion. In fact, Melville referenced related “purple vials” in the first sentence of his story “The Apple Tree Table” the same year.

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154 Melville, Pierre, 9
155 For more on purple dye see Simon Garfield, Mauve (Faber & Faber, 2013). For more on synthetic dye, in general, see Stephen van Dulken, Inventing the 19th Century (NYU Press, 2006), 188; The Development of the Chemistry of Commercial Synthetic Dyes (1856-1938) (Royal Institute of Chemistry, 1938).
156 For more on developments in the production of verdigris see, for example, London and Edinburgh Philosophical Magazine and Journal of Science (Richard Taylor, 1836), 395.
157 Melville, Piazza Tales and Other Prose Pieces, 378.
Melville’s references to chemistry in this incredibly rich passage do no stop with dyes, the “democratic element,” and the “uncrystalizing Present.” Instead he continues by developing this idea that corrosion is also the “signet” or authenticating seal of the “luxuriance of life.” Here corrosion is also inextricable from both “green” and “fertile Nature.” And as Melville explains it: “the most mighty of nature's laws is this, that out of Death she brings Life.” John Draper describes this process as “the transmutation of inorganic into organized matter.” And Melville offers a stunningly similar account: “Death itself becomes transmuted into Life.”

Of course Melville pushes further than Draper, as critics discussing politics have noted. My suggestion is simply that this passage is not only about the workings of our national structure. Yes “families be as the blades of grass,” sometimes “decaying” but also “put[ting] forth new branches.” And with Pierre—or, perhaps, with his father—we see the unchartered aristocracy’s “corrosion” become “fertilized” indeed. But for Melville in “nature”—apart from the contractual language of charters—this “decay” also opens a whole new world of life and transformation. And this reading is not only about America or its democracy. It is ultimately about the natural law that allows for discussions of larger scales. With elements—and with the “democratic element” that may reference Isabel—“Death” always turns into new “Life.” So instead of titles and “entail” here the focus is on the way that “any family in America” might “perpetuate itself,” or in how it might survive in a world where families are allowed to “rise and burst like bubbles in a vat.” This runs much deeper than “government,” which is explicitly second to “natural law.” It is about perpetuation or endurance, and America is explicitly said to be discussed only “by apt analogy.”

The real focus of Melville’s passage—his “Death itself becomes transmuted into life,” alongside Draper’s seemingly related “transmutation of inorganic into organized matter”—also appears in Liebig’s portrayal of a kind of perpetual material recirculation and resurrection:

158 Draper, A Treatise on the Forces Which Produce the Organization of Plants, iii.
159 Melville, Pierre, 9
160 Melville, Pierre, 9
“the most ordinary experience further shows, that at each moment of life, in the animal organism, a continued change of matter, more or less accelerated, is going on; that a part of the structure is transformed into unorganized matter, loses its condition of life, and must be again renewed.”

This “unorganized matter,” for Leibig, becomes a kind of third option that enables the rest of this model to function. It’s unorganized, which means it circulates: things aren’t living or dead—organized or crystallized. Instead this circulating matter external to “life” is required for it in a conceptual scheme where “life” is growth or structured motion. This is by no means accidental or imprecise. Two pages later, Liebig adds that if something “loses its state of vitality,” it’s brought back into circulation—or returned to the atmosphere as “unorganized amorphous compounds”\(^{161}\)

In short Liebig imagines the living, the dead, and the shapeless material between them. This is the logic in play with both Pip’s “unwarped world” or Pierre’s “unembodied” images.\(^{162}\) Here the development of “living” or “organized matter” becomes the clear alternative to the models of perpetual or “amorphous” circulation that shaped my first chapter.


\(^{162}\) A living body is imbued with a peculiarity of form, and does not require an identity of composition; an inorganic body depends for its nature on certain and definite composition, without any relation to structure... crystallizations... life, then, is a state of force... for we are taught to make a distinction between crystalline arrangement and living structure.” Draper, *A Treatise on the Forces Which Produce the Organization of Plants*: 42.
Organization, Emergence, and the Human’s Geological Layers

"Organic chemistry is so-called because it treats of the substances which form the structure of organized beings."163 And here “organized” references compounds that “depend, not only on the nature, but very much on the arrangement of its elementary atoms,” or on the way they’re grouped together to form new compound molecules.164 These “ultimate atoms” of bodies do not penetrate each other, they are only arranged side by side in a certain order, and the properties of the compound depend entirely upon this order. If they are made to change their place, or their mode of arrangement, by an impulse from without,” then they simply recombine—and another compound with different properties is formed.165

Here things follow a kind of hierarchy that’s a matter of complexity. Liebig offers, for example, that “no part of an organized being can serve as food to vegetables, until, by the process of putrefaction and decay, it has assumed the form of inorganic matter.” And the “animal organism,” in turn, requires “support and development” from highly organized atoms.” (In other words: they need food, not light).166 So with this model of organized structures, differences in kind have disappeared. But differences of degree were still essential. And the problem and task of chemistry was, specifically, to discover the relationships between atoms, their arrangements, and the ways visible forms were produced amidst the process of “building up more complex out of less complex molecules.”167

“Organized tissues, and their products” were seen as having “a more complicated constitution than inorganic compounds,” which means they contained more elements. \(^{168}\) In fact, as Draper frames it, “organization in itself implies complicated structure.” After all, their changes are more rapid: “the carbonic acid escapes by the lungs, the nitrogenized compounds through the kidneys, and water through both the organs and the skin.” In short, “the putrefaction of an organized being is a constant event,” its “various parts undergo an incessant change,” and “in this law of unceasing variation, we discover that each of its component structures passes through its transmutations more rapidly according as its constitution is more complicated.” \(^{169}\)

The pinnacle of “organization,” not surprisingly, is the human brain: “we do not know with any certainty the formula or even the nature of any of the proximate constituents of the brain,” but "this remarkable tissue, performing the highest functions… must have a constitution still more complex than the other tissues of the body." \(^{170}\)

This model stands in contrast to traditional notions of dualism—and to eighteenth-century vitalism. \(^{171}\) But its rise was concomitant with strong resistance to the idea of vital force. John Draper offered, for example, in 1844 that finally “the existence of the Vital Force of physiologists—as a homogenous and separate force—is uniformly denied. There is no mystery in animated beings which time will not at last reveal.” \(^{172}\) And Leibig pushed even further, explaining that “in the age, not yet long past, of metaphysical physiology, everything was explained by vital force.” But “the reaction,” conversely, “rejects the vital force, and believes in the possibility of reducing all vital processes to physical and chemical causes.”\(^{173}\)

Historian of Chemistry Ursula Klein offers


\(^{172}\) Draper, *A Treatise on the Forces Which Produce the Organization of Plants*: 2.

an especially helpful summary, explaining, very directly, that the idea of bodies “formed under the influence of life force” was totally unable to “keep up with scientific progress.”

As I’ve mentioned a number of thinkers also offered structural alternatives, turning to the idea of a continuum between the “inorganic” and the “organic” or “vital.” For Leibig “the physiologist is ready to discuss living bodies in terms of inorganic nature alone,” specifically as a “reaction” to the idea of “vital force.” For Draper new work in Chemistry was sufficient to show that “there is no essential distinction to be made between organic and inorganic Chemistry.” And for Draper “living structures, far from being the product of one such homogenous power, are rather the resultant of the action of a multitude of natural forces.” In fact, “living form” “evolves,” and its shape depends on the way that those “agents conspire.” On this model, we learn, “the problem of chemistry is not to discover the form, but to determine the relation between the form and the elements, with their arrangement, by which that form is produced.”

Finally, these structural alternatives are clearly linked to an idea that we now call “emergence.” In Leibig’s words: “a chemical compound of two bodies possesses properties which are entirely different from those of its elements. The chemical force of the new body, its power to form new combinations to decompositions, is not the sum of the chemical forces of its elements.” Instead when a collection of elements are combined in ways that form an animal or vegetable substance—or when they have “acquired physiological or vital properties”—“another cause: is somehow added to the chemical forces, which gave them their original properties.” This is exactly the logic of contemporary discussions of non-linear emergence—where a “whole” is somehow greater than the sum of its parts.

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174 Klein, Paper Tools: 76.
175 Liebig, Animal Chemistry: 168.
176 Draper, Organization of Plants, Harper & Brothers, 1844: 2.
177 Liebig, Animal Chemistry: 167.
This period of transformation from endowed vitality to complex structure was Melville’s immediate context. We know that he was reading chemistry. And we might even consider the possibility that for Melville and others this shift in what it meant to be “organic” or “alive” may have been as important as Darwin (if not a foundation for his work). At the very least, this way of thinking about “life” laid the groundwork for the transformation from naturalists to biologists and zoologists. And Melville explicitly references that transformation in The Confidence-Man when he offers: “it is as true in literature as in zoology, that all life is from the egg.” 179

Melville arguably follows this logic all the way to humans, which he carefully lets Babbalanja express: “kangaroos formed the first edition of mankind, since revised and corrected.” “My ancestors were kangaroos, not monkeys.” And “although man is no longer a kangaroo, he may be said to be an inferior species of plant.” 180 Then in The Confidence-Man the Philosophical Intelligence Officer queries: “In the natural advance of all creatures, do they not bury themselves over and over again in the endless resurrection of better and better?” 181 Finally, of course, in “The New Ancient of Days,” which instructs “See Lyell’s The Antiquity of Man and Darwin’s The Descent of the Species,” Melville poses the question: “And why cut your kinsman the ape?” 182

This evolutionary language raises the question of the century: what about the soul? But Melville’s White-Jacket explicitly suggests that souls can “leak.” In fact, in discussing a sailor waiting to be whipped he explains that incredible “torments” belong to the sailor who “bleeds agonized drops of shame from his soul” while “his back bleeds at the gangway.” 183 His soul, somehow, leaks drops of shame in response to violence that’s performed upon the flesh. And while we might be inclined to say this is just a metaphor, it follows a suggestion that the soul is also a place where things are buried in some private interior. In short: this is a soul that’s spatial.

181 Melville, Confidence-Man, 124.
183 Melville, White-Jacket, 142.
We find a multitude of remarkably similar descriptions of the soul throughout Melville’s work. For example—as I discuss in my first chapter—at the end of “Loomings,” endless processions of whales go floating two-by-two into Ishmael’s “inmost”—and thus curiously spatial —soul. Pierre’s soul has its own curious geography: momentary feelings roll down it like “melted lava.” And those feelings, like lava, leave “deep deposits” in his equally curious “soil.” “Ineffable hints and ambiguities” also “people [his] soul's atmosphere, as thickly as… snow-flakes people the air.” So at the end of the day, if souls can be entered by whales, lava, and snowflakes—and if they can also be exited by drops of shame—then it’s reasonable to ask: are Melville’s souls material?

We encounter a description of Pierre’s “region of thought”—just before he explains to his mother that he has “gone wandering in [his] soul,” which has, I think, a geology and a geography. (Pierre is also described as “afloat in himself.”) Ahab’s “torn body and gashed soul,” in turn, “bled into one another.” And it’s worth remembering that in White-Jacket our protagonist tells us: “All I had seen, and read, and heard, and all I had thought and felt in my life, seemed intensified in one fixed idea in my soul. But dense as this idea was, it was made up of atoms.” Meanwhile, in Mardi we encounter the “soul and body glued together, firm as atom to atom, seamless as the vestment without joint, warp or woof.” So this account of a kind of spatial, material soul seems well-established as, at least, a possibility for Melville. The open question is what—in the 1850s—a material soul might mean or be.

Melville doesn’t only offer a soul that is spatial: his model of cognition or action is unexpectedly grounded in repeated portrayals of souls as not as Spirit or as Reason but as “insects”—worms included. And this description of souls in terms of atoms, “whales,” and

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184 Melville, Moby-Dick, 7.
185 Melville, Pierre, 67.
186 Melville, Pierre, 284.
187 Melville, Moby-Dick, 185.
188 Melville, Mardi, 433.
insects links Melville to debates about life and grounds his organizational model. For example, in “Benito Cereno” we learn that Babo’s head’s a “hive of subtlety,” which might be seen as a reference to the idea of his thoughts’ basis in a collection of “unthinking” smaller particles, which collectively yield advanced behavior. And “Ahab’s soul,” we are told, is also “a centipede,” which adds a second layer. Of course it “moves upon a hundred legs,” which offers a similar model of collaborative work. But the term also has a naval usage—wood pierced with holes that has rope running through it—which clearly captures the spirit of the passage. Ahab tells us: “I feel strained, half stranded, as ropes that tow dismasted frigates in a gale; and I may look so. But ere I break, ye’ll hear me crack; and till ye hear that, know that Ahab’s hawser”—a thick rope—“tows his purpose yet.” This reference to a spinal cord comes, we should note, from a character who says he’ll “dissolve [him]self down to one small, compendious vertabra”).

Chapters after he discusses flogging in the abstract, White-Jacket learns that he is going to be flogged. First he “desperately” tries to swallow his “whole soul.” But he can’t swallow his dignity. So he decides that he’s actually willing to die. Then Melville configures what may seem like an investment in “selfhood” as part of some greater vitality. “The thing that swayed [him] to his purpose” was specifically not fear or some commitment. Instead, he explains: “I felt my man’s manhood so bottomless within me, that no word, no blow, no scourge of Captain Claret could cut me deep enough for that. I but swung to an instinct in me-- the instinct diffused through all animated nature, the same that prompts even a worm.”

This “instinct diffused” may feel like a sort of vitalism. But this comes at a moment when physiologists were cutting worms and bugs into pieces—and offered, for example, that “the head cut off from a fly, or any other insect, soon dies, the body still surviving for some time; so that the

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189 Melville, Piazza Tales and Other Prose, 116.
190 Melville, Moby-Dick, 562.
191 Melville, Moby-Dick, 472.
192 Melville, White-Jacket, 280.
head would seem more dependent on the body, than the body on the head.”¹⁹³ (One “compendious vertebrae,” it seems, may be enough for Ahab to repopulate, at least in his imagination). Melville knew at least some of this from his copy of Charles Bell.¹⁹⁴ And Babbalanga offers exactly this theory in *Mardi*:

> Our souls belong to our bodies, not our bodies to our souls. For which has the care of the other? Which keeps house? Which looks after the replenishing of the aorta and auricles... Which is the most authoritative?—Our bodies, surely... And how many millions there are who live from day to day by the incessant operation of the subtle processes in them, of which they know nothing, and care less?... they live by the charity of their bodies, to which they are but butlers.¹⁹⁵

So Melville’s turn to “even a worm” is not actually surprising. We see something similar in the “pantheist energy of will” that shapes Melville’s “Venice.” (Its “little craftsmen” are “coral,” which was described as both “insects” and “worms”). And seeing this move in work as different as *White-Jacket* and *Timoleon* is telling. (“Worms” are also the “insect” Melville turns to when he produces a “material resurrection” in “The Apple-Tree Table,” which I am about to discuss). And in comparing “insects” and “atoms” insects seem to be—for Melville—the lowest common denominator of *life*. This is a clear theme throughout Melville’s work, as I have clearly discussed with coral insects. But there is also an entomological history here.

The words “atom” and “insect” are closely related: atom comes from *atomos*, or “indivisible,” while “entomology” comes from *entomos*, or “that which is divided into segments,” since insects have a notch or cut at the waist. In Latin this became *insectum*, or “that which can be cut up,” inextricably linking insects and dissection. This connection frames insects as creatures that resemble what we now call compounds. They have a clear simplicity and—in Melville’s imagination—insects seem to be the building blocks of creativity and generativity, like atoms¹⁹⁶

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¹⁹³ David Badham, *The Question Concerning the Sensibility, Intelligence, & Instinctive Actions of Insects*, 1837, 5.


This reading of Melville’s insects raises a question: whether Melville really imagines this model of “up-building” applying to humans. I take his multitude of references to a process of geological layering to indicate that, in fact, he does. As I discussed in my introduction, he offers: “the world overlays and varnishes us.” We “abdicate ourselves and take unto us another self.”\textsuperscript{197} And for Melville this is generally framed in terms of layers, as when we find that “subtle agencies” from the “atmosphere” “wrought on Ahab’s texture.”\textsuperscript{198} These are the marks of incredibly slow changes so small that they’re invisible—but where—as with the geological processes they emulate—accrual eventually leads to visible results.

This is a model where, I think, we have to consider the fact that Melville shared an editor—John Murray III—with both Charles Darwin and Lyell. And Melville cites both thinkers directly in “The New Ancient of Days,” which considers the fossilized fragments of a human skull. Melville also engaged extensively with fossils and geological processes throughout \textit{Mardi}, which is said to be based on Lyell.\textsuperscript{199} And he clearly engages with Lyell’s uniformitarian theory, or with the idea that the world had been shaped not by catastrophes or supernatural forces—but by countless and continuing small changes—like erosion and earthquakes—over vast periods of time, which is the claim at the heart of my first chapter. These changes included the slow, grinding force of wind and of water. And even in \textit{Moby-Dick}’s allegedly \textit{catastrophic} ending—which I’ve framed as a hurricane—we encounter not a dramatic, sudden change but an atmospheric event which has been building for several chapters, as Melville discusses oxygen and atmospheric air. In short: for Melville these changes are consistent, slow, steady, and \textit{material}.

The most powerful moment for Melville’s logic of layering comes early in \textit{Pierre}, when Melville offers a kind of geological model of “surface stratified on surface.” Here he offers: “in their precise tracings-out and subtile causations, the strongest and fieriest emotions of life

\textsuperscript{197} Melville, \textit{Pierre}, 83.
\textsuperscript{198} Melville, \textit{Moby-Dick}, 126.
\textsuperscript{199} Foster, “Melville and Geology,” 54.
defy all analytical insight”—exactly because “the most impressive, sudden, and overwhelming event, as well as the minutest, is but the product of an infinite series of infinitely involved and untraceable foregoing occurrences.” “Just so,” Melville continues, with the “motion of the heart” —then a common way of describing a heartbeat driven by the spinal cord. And Melville, in turn, goes on to discuss “red cheeks” and “scornful lips” as things “not wholly imputable to the immediate apparent cause, which is only one link in the chain; but to a long line of dependencies whose further part is lost in the mid-regions of the impalpable air,” as I discussed in detail.

This is certainly not the way we tend to account for agency—or for emotion. Pierre’s feelings “rolled down [his] soul like melted lava.” And those feelings—like lava—leave deep “deposits” in his curiously identified “soil.” (“Soil is clearly and tellingly doubled with “soul”). Pierre wants to find his own “unlayered substance,” but, instead, Melville offers: “as far any geologist has yet gone down into the world, it is found to consist of nothing but surface stratified on surface. To its axis the world is “nothing but superinduced superficies.” And in this moment of discussing the soul in terms of impalpable but material layers, Melville mentions coral insects, making the connection explicit: “most grand productions of the best human intellects ever are built round a circle, as atolls (i.e. the primitive coral [islands]). And, finally, here Pierre turns, not surprisingly, to chemistry: we get “transitions,” “unmalleable elements,” “fluid” “airiness,” “combinations,” and the “invisible and eternally unembodied images [inside] his soul,” which seem conceptually connected to the “unwarped” or “formless” world that we glimpse with Pip, watching “God’s foot on the treadle of the loom” in “material factories” amidst coral insects.

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200 Here see, for example, William Harvey and Robert Willis, The Works of William Harvey, M.D. Physician to the King, Professor of Anatomy and Surgery to the College of Physicians (London: Sydenham Society, 1847), 21-23; Emanuel Swedenborg, The Economy of the Animal Kingdom, Considered Anatomically, Physically, and Philosophically (Boston: Otis Clapp, School Street, 1846), 403-404.


202 Melville, Pierre, 283.
In his remarkable “Life and Orders” Didier Debaise actually uses coral to open up the suggestion that all “subordinate entities—be they cells or molecules—partake in the existence of the more comprehensive society that is the organ. But despite their participation they ignore the larger context and act on their own account according to the logic and identity of their inheritance and their “historical route.” These “components souls,” he adds, borrowing from Samuel Butler, are “coral reefs and sponge-beds within us,” that “change in the very notion of the individual. The individual is no longer a simple entity that traverses time by superficial variations or changes that are secondary to its relation with a primary identity. Instead, the individual has become “an assemblage of transactions, and negotiations, of reciprocal requests and of produced dependences between its inherent existences that each prolong a history and their inherited habits.”

Melville, I am suggesting, agrees, largely thanks to his engagement with coral, geology, and to some degree chemistry. After all, in Pierre we see the same development from coral to human that we find in “Venice”:

Swayed to universality of thought by the widely-explosive mental tendencies of the profound events which had lately befallen him, and the unprecedented situation in which he now found himself; and perceiving, by presentiment, that most grand productions of the best human intellects ever are built round a circle, as atolls (i.e. the primitive coral islets which, raising themselves in the depths of profoundest seas, rise funnel-like to the surface, and present there a hoop of white rock, which though on the outside everywhere lashed by the ocean, yet excludes all tempests from the quiet lagoon within), digestively including the whole range of all that can be known or dreamed; Pierre was resolved to give the world a book, which the world should hail with surprise and delight.

Melville also more directly suggests a conceptual connection between Pierre and “Venice”:

“Love is built upon secrets, as lovely Venice upon invisible and incorruptible piles in the sea.”

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204 Melville, Pierre, 283.

205 Melville, Pierre, 81.
The real question, of course, is: did Melville really think this? He was clearly still thinking about coral in this way when he began his final work. *Clarel’s* opening includes a telling exclamation to this effect:

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\begin{align*}
\text{Ah! These under formings in the mind,} \\
\text{Banked corals which ascend from far} \\
\text{But little head men that they wind} \\
\text{Unseen, unheard.}^{206}
\end{align*}
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In this moment, it seems, coral isn’t only about emergence or its remarkable growth, by way of “little builders.” Here coral is also the “insect” that helps Melville imagine a kind of unconscious. Melville clearly at least considers this idea of materially emergent humans—souls included. But I will conclude this chapter by turning to what seems like an announcement of his sense of conflicted ambivalence in his last story, “The Apple-Tree Table.”

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“The Apple-Tree Table” and “The Motion of Life”

Melville published “The Apple-Tree Table” in May of 1856, and with the exception of The Confidence-Man, it was his final piece of published prose. It appeared in Putnam’s, and in 1922 it became the headline piece in the second collection of Melville’s work: The Apple-Tree Table and Other Sketches. Those mere “other sketches” notably included work that is far more popular today, including “Hawthorne and His Mosses” and “The Paradise of Bachelors and the Tartarus of Maids.”\(^{207}\) So clearly this story’s popularity has declined. In the present moment, it is by no means well-read. So here it seems appropriate to begin with a brief summary.

Our narrator goes up into a garret in his house, which was thought to be haunted. He finds the rumor absurd, but even so, he has conveniently neglected to visit the garret for five entire years. That changes abruptly when he finds a key. And in this moment Melville characteristically offers an interpretation: “now, the possession of a key to anything, at once provokes a desire to unlock and explore.” And so he does. He finds a table in its furthest corner. It’s “satanic-looking” but also “necromantic”—or linked to communication with the dead. The table is next to a moldy, old copy of Cotton Mather’s Magnalia. And it’s surrounded by insects: millions of insects, swarming and buzzing; thousands were clustered into a golden mob. Scores crawled forth. And in cobwebs, these insects “swung, as in aerial catacombs, myriads of all tribes of mummied insects,” “festooned and carpeted and canopied with cobwebs, which, in funeral accumulations, hung” like Carolina moss. Here, again, “the most mighty of nature's laws” is “that out of Death she brings Life.” But Melville knows that process requires light. And the “aerial catacombs” were near the “sole source” of light—“a single small pane of glass”—that was “filtrated through a dense curtain of cobwebs.”\(^{208}\)

\(^{207}\) Herman Melville, The Apple-tree Table and Other Sketches (Princeton University Press, 1922).

\(^{208}\) Melville, Piazza Tales and Other Prose Pieces, 378-380; Melville, Pierre, 9.
Climbing higher our narrator is “overrun” by insects, so he opens a window. “And ah!” he declares, “what a change.” Here Melville offers another overdetermined account, as he tells us: “as from the gloom of the grave and the companionship of worms, men shall at last rapturously rise” not into heaven but “into the living greenness,” which he unexpectedly pairs with the “glory-immortal.” “Refreshed by this outlook,” he leaves his verdant heaven: green treetops built on top of “decomposing graves,” with the help of worms. And he felt compelled to save what seemed to be a “sad little hermit of a table, so long banished from genial neighborhood… little dreaming what all this warm nursing would hatch.” The table was made of “apple-tree wood.”

A few weeks later, our narrator frightens himself reading “ghostly, ghastly Cotton Mather,” working himself up, and getting more and more nervous. It begins to feel like he is the protagonist of a story by Poe when he hears “a faint sort of inward rapping or rasping—a strange, inexplicable sound that sounds like “unaccountable ticking.” Here Melville starts to represent a kind of sound: “Tick! Tick!” “Tick! Tick!” Our narrator panics. His wife says he needs to give up drinking “punch.” But instead he “resolved to put Cotton Mather permanently aside.”

The next morning, things continue and his daughter makes an almost predictable declaration. Our narrator cites the infamous “Fox Girls” faking spirit rapping. And, in turn she cries out: “‘Spirits! Spirits!’” (What else could one say to “unaccountable ticking”?) Our narrator’s pulse flutters. His heart beats. And then he makes an unexpected turn from Cotton Mather, realizing that in his place Democritus “comes to the rescue.” Our narrator “resolved to imitate” his “occupation and his attitude.” He buried himself in study, attempting to seem “indifferent.” And

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209 Melville, Piazza Tales and Other Prose Pieces, 380-381.
210 Melville, Piazza Tales and Other Prose Pieces, 382-385.
211 Melville, Piazza Tales and Other Prose Pieces, 382. The “Fox girls” were sisters in upstate New York who were associated with widely reported instances of “spirit-rappings” between 1846 and 1850. As the editors of the Northwestern-Newberry collection explain, Melville could have read about them in the Literary World, VI, no. 163 (March 16, 1850), 256, where their story appeared alongside his own “A Thought on Book-Binding” or in several issues of Putnam’s, among other possible sources. For more see Melville, Piazza Tales and Other Prose Pieces, 721 or Joscelyn Godwin, Upstate Cauldron: Eccentric Spiritual Movements in Early New York State (SUNY Press, 2015). (Melville would have also encountered a discussion of spirit rapping in Hawthorne’s The Blithedale Romance). Also see “Rap! rap! rap!” on 395.
he “strove to look at the strange object in a purely scientific way,” experiencing a kind of “increasing self-possession.” This tension between Mather and Democritus continues on for several pages. And finally the mystery is solved: the noise is coming from a bug. An insect, a glow-worm, “whatever it might be”—it’s a creature that makes “the motion of life.”

The expected response to this “motion of life”—especially for those of us who are accustomed to critique—is that, with the arrival of the “bug,” we’ve finally shown that there aren’t Spirits. (Our protagonist’s daughter called out “Spirits! Spirits!” So did the “Fox girls,” and that’s all a hoax). Reading “ghostly, ghastly Cotton Mather” we might feel moved to imagine such things, but now we all know better. The “verdant heaven” is secular. And the sounds are only insects.

Our narrator certainly attempts to take this line. He thinks of Democritus and “resolved to keep cool,” or “to look at the strange object in a purely scientific way.” And he decides that “at all events, the mystery of the ticking was explained. It was simply the sound of the gnawing and filing, and tapping of the bug, in eating its way out.” His problem is solved. And yet: our narrator isn’t comfortable enough with this conclusion to chose Democritus over Cotton Mather. Instead he calls in an “eminent naturalist” to “enlighten [their] ignorance.” The naturalist, not surprisingly, responds to his daughter’s belief: “‘She did not really associate this purely natural phenomenon with any crude, spiritual hypothesis, did she?’” And in case we somehow miss his tone, Melville interprets it, adding: “observed the learned philosopher, with a slight sneer.”

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212 Melville, Piazza Tales and Other Prose Pieces, 385, 388-389.
213 Melville, Piazza Tales and Other Prose Pieces, 398-390.
215 Melville, Piazza Tales and Other Prose Pieces, 390.
216 Melville, Piazza Tales and Other Prose Pieces, 396-397. Our narrator, while imitating Democritus, also describes it as “nursery nonsense.” Melville, Piazza Tales and Other Prose Pieces, 394.
Carolyn Karcher offers a kind of extension of this reading: “The Apple-Tree Table” may seem like a straightforward satire of Spiritualism, which is buried “beneath an innocent ghost tale.” But an even more subversive satire of Christianity is available to what Karcher describes as real readers—as opposed to the “superficial skimmer of pages.” (Observed the critic, with a slight sneer?) Here the subversive claim that Karcher brilliantly draws out is that there is nothing Christian about believing in immortal souls. In fact, Karcher tells us, that is a pagan belief when, in fact, the Apostles Creed is really about “the resurrection of the body.” Put directly: believing in the “rappings” requires a belief in disembodied spirits that—for Karcher, at least—Christians shouldn’t have. So for Karcher what we learn in the garret is that “men will rise from the grave and the companionship of worms,” not into heaven but specifically “into the living greenness,” which is the real “glory-immortal.”

Unfortunately Karcher sees this as bad news. For her these are “mere insects,” and even the “epitome of insignificance.” But instead of describing Karcher as an equally bad reader, I want to push her insight further—and to seriously consider Melville’s focus on material reincarnation—with the help of worms. This remarkable creature—a “small shining beetle or bug”—is a creature that makes “the motion of life” against incredible odds. After one hundred and fifty years it manages to hatch and then to eat its way through about forty layers or cortices of wood. This timeline is actually longer than the eighty years it takes in Melville’s ever-present source texts: Dwight’s Travels in New England and New York and Field’s A History of Berkshire County. Like we see with coral insects here Melville chooses to exaggerate what the bug can do.

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219 Melville, Piazza Tales and Other Prose Pieces, 393-394 and, especially, 396-7.

220 For a discussion of Melville’s source texts for this idea see Douglas Sackman, “The Original of Melville’s Apple-Tree Table,” American Literature, 1940 or the editors’ notes to Melville, Piazza Tales.
This insect, it turns out, wasn’t alone. After a “Rap! Rap! Rap” two more bugs come to the surface, wriggling through its “cracks.” The third even makes it out after our narrator’s wife “hermetically closed the little hole in the table” with cement.221 And here I want to return to the passage that shapes this project’s introduction: Ahab’s body has a “leak” that “breaks” and “cracks” and lets a storm “burst in upon him.” He declares that he won’t “stop to plug [his] leak,” since he’s not even sure he could “find it… in this life’s howling gale.” But Ahab does, eventually, ask Perth, the Pequod’s blacksmith, to forge, or weld, his “seam.” And Perth replies the he can weld “all seams and dents but one.”222 Like Ahab with his “crack” that Perth can’t seal from “life”—or from the tellingly “vital centre” of motion that drives Melville’s vortex—the impossibility of both containment and security is central to Melville—who seems to frame “life” as a state of permeability and change, while “death” involves being “hermetically closed.”223

In these passages, as I’ve spelled out, “life” is exactly this “motion” that Leibig and Draper describe. It’s in this process of forming new structures, like the worms that lead the way from death to “living greenness” and this “glory-immortal.” As I’ve just suggested, decomposition and photosynthesis matter for Melville. And this work’s hero, the bug, leaves his dark attic then offers “the motion of life.” This idea of a kind of material resurrection is a thread that runs through Melville’s work. In White-Jacket, for example, when sailors die, they’re sealed with what Melville describes as “the last stitch” before they’re “buried” overboard. Then thanks to the gasses they produce they buoy back up.224

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221 Melville, Piazza Tales and Other Prose Pieces, 395, 392.
223 This bug’s “crack,” it is actually described using language the resonates with Melville’s account of Ahab, whose slow rubbing of the gold doubloon on “The Quarter-Deck” “seemed the mechanical humming of the wheels of his vitality in him.” The bug’s striking birth by “tremor” is “not without something of a hum to it, too.” Melville, Moby-Dick, 162; Melville, Piazza Tales and Other Prose Pieces, 389-391.
This reading that “Death itself becomes transmuted into Life” helps us start to make sense of the multitude of insects in the attic, where “myriads of all tribes of mummied insects” swung up in the attic in “aerial catacombs” eventually emerging and headed towards the light. (The bug in the apple-tree table also escaped the crack “like a butterfly escaping its chrysalis.”)225 This relationship between death and life is even more direct in Moby-Dick: “the mere skeleton of the whale bears the same relation to the fully invested and padded animal as the insect does to the chrysalis that so roundingly envelops it,” we are told, as if the “fully invested and padded animal” were also just indicative of a transitional state. (The skeleton of a whale, of course, is also the occasion for Melville to declare that amidst more vital humming as the scaffolding for the production of “greener, fresher verdure,” “Life folded Death” and “Death trellised life,” and anthropomorphized “curly-headed glories”).226 Like the worms that lead the way from death to “living greenness,” here insects trellis life.

The narrator of “The Apple-Tree Table” is influenced by two different voices: Democritus and Cotton Mather. And both men, it turns out, frame insects as incredibly important. Insects abound in Cotton Mather’s work on science. The Christian Philosopher has a chapter—“On Insects”—where he describes insects as “complete” entities with “astonishing” “workmanship.” As the chapter continues, Mather describes the “motion of the heart”—like the bug’s “motion of life”—as the thing that separates animal from mechanism.227 Melville uses this phrase repeatedly, to describe imperceptible sources of causation, like “the impalpable air” that places a starring role in my first chapter. There Melville also turns to “every motion of the heart.”228 And, strangely enough, Mather also compares these imperceptible agencies to insects: “Every Part of Matter is peopled,” he tells

225 Melville, Pierre, 9; Melville, Piazza Tales and Other Prose Pieces, 379, 389.

226 Melville, Herman, Moby-Dick: 263, 450.


228 Melville, Pierre, 67.
us. And “every green Leaf swarms with Inhabitants.” In fact, “the Surfaces of Animals are covered with other Animals. Yea, the most solid Bodies, even Marble itself, have innumerable Cells, which are crowded with imperceptible Inmates.” And these “inmates”—specifically insects, we eventually learn, “may insinuate themselves by the Air... thro’ the Pores of our Skin; and soon get into the Juices of our Bodies.” Melville obviously repurposes this intriguing description of “matter” as “peopled” in Moby-Dick’s “The Mast-Head,” when Ishmael describes “elusive thoughts” that “people the soul by continuously flitting through it.” But Melville also tellingly turns away from models like Mather’s that focus on “workmanship.” Instead he turns to Democritus, along with a suggestion that humans were generated from the earth like worms. A different version suggests that he “observed strange alterations in the bodies of insects, from worms to flying animals”—and asked whether “man” came into the world in the same way.

What these readings by Mather and Democritus share is that these don’t seem to be Karcher’s “mere insects.” Mather credits divine workmanship, and Democritus at least allegedly suggests that there’s no creator at all. But for both thinkers insects have life that’s just like ours. This difference matters, of course, but Melville doesn’t take a side. Both thinkers are mentioned in seven different moments, and their names are each used exactly nine times. It’s a careful and seemingly intentional balance. And near the end of this tale, our narrator corroborates, explaining: “my present feelings were of a mixed sort. In a strange and not unpleasing way, I gently oscillated between Democritus and Cotton Mather. But to my wife and daughters I assumed to be pure Democritus—a jeerer at all tea-table spirits whatever.”

229 Cotton Mather, “Saturday, October 25, 1712,” in The Spectator: Complete in One Volume (printed by and for A. Wilson, 1813), 744-745. Also published as an Appendix to Mather’s Angel of Bethesda.

230 Melville, Moby-Dick, 159. We see this language again in Pierre, when “ineffable hints and ambiguities people the soul’s atmosphere.” Melville, Pierre, 84.

231 Melville, Piazza Tales and Other Prose Pieces, 394. It is difficult, here, to not think of Hawthorne’s account that Melville: “can neither believe, nor be comfortable in his unbelief; and he is too honest and courageous not to try to do one or the other.”
The question, of course, is: why the false consciousness? Why pretend instead of simply taking Democritus’ side? Melville’s narrator may seem to support “scientific” observation, but he also undercuts it: “‘now, Julia,’ said I, after that scientific statement of the case (though, I confess, I don’t exactly understand it) ‘where are your spirits?’” This aside speaks volumes. He doesn’t have the evidence he needs to follow the naturalists’ account. As Thomas Pribek points out, he also looks to Democritus in a sort of desperate way, resolving to try to be like him, which he can’t pull off.232 And, finally, this description of his internalized fantasy of Democritus is also telling. That figure “instinctively affirmed [spirits as] a humbug.” And instinctual responses aren’t based on observation. Put directly: here Melville seems to suggest that a commitment to empiricism doesn’t leave us any more certain about Democritus’ claims than we could be about what Mather posits when he goes beyond the microscope. And this returns us to the sort of “speculative materialism” that I discussed in my first chapter.

We never actually find out that we’re not dealing with spirits in this story. Our narrator’s daughter certainly realizes that she’s looking at insects, but she continues, “Spirits! spirits.” And the subtitle of the story is, quite tellingly, “Original Spiritual Manifestations.” So it’s entirely possible that the payoff is that these are a different sort of “spirits”—or “the motion of life.” Unlike other readings, this one actually accounts for his daughter’s final insistent: “Spirits! Spirits!” “I still believe in them with delight, when before I but thought of them with terror.”233

232 “Melville never seems to resolve the central issues in the tale,” Pribek explains, largely because he oscillates between the “rational and temperate Democritus” and “a superstitious Cotton Mather.” Pribek makes the excellent point that our narrator doesn’t draw on Democritus in anything resembling an objective way. He isn’t comfortably acting like Democritus; he “resolved” to try to be like him. And, second, that means “that any possible investigation of any spiritual phenomena was absurd,” since, “the mind of a sane man instinctively affirmed them a humbug.” This, in short, is about instinct, not investigation. “Between Democritus and Cotton Mather”: Narrative Irony in "The Apple-Tree Table,” Studies in the American Renaissance (1989): PG.

233 Melville, Piazza Tales and Other Prose Pieces, 397.
3. Social Collectives

In “The Poetics of Union in Whitman and Lincoln,” Allen Grossman explains that both thinkers attempted to reconstruct the Union as a just and stable polity. But they went about that project in vastly different ways.1 Grossman describes Lincoln’s strategy of order as an amplification of a legal grammar adapted to political use. It was based in Aristotelian laws like identity, non-contradiction, and the excluded middle. For example, “a house divided against itself” quite famously “cannot stand.” And Lincoln offered a series of what are ultimately commutative equations: “from these honored dead we take increased devotion to the cause.”2 Not surprisingly, given this emphasis on logic, Lincoln also describes secession as problematic specifically because it was in conflict with the Law. It violated the Constitution, or the alleged contract that federated these “United States,” which existed logically, even when empirically they were, quite literally, under fire. Here Grossman sees a kind of elegance: this policy, which intends the same structure as its discourse, was a kind of “poetry.”3

For Grossman Whitman confronted a need to reconstruct the Union as a just and stable polity without recourse to anything resembling legal grammar. Instead he devised a “song” that would somehow reconcile “variety and order,” “equality and constitution,” and “the one and the many” without compromising either term. And ultimately for Grossman Whitman’s driving supposition was the idea that equality required the establishment of “a new basis of speaking”: “a massive trope of inclusion” that replaced logic with the counterlogics of “infinite distribution” and

“affectionate presence.” Put directly: logic and laws are irrelevant in the face of Whitman’s powerful account of the work of a poet: “I spring out of these pages into your arms.” Ultimately for Grossman, Whitman’s poetry attempted to release the world from the overdetermination of representation. And “the one justifiable order of the world” was the one “he invented himself,” or “his song.” (The United States, in turn, was “the greatest poem”).

So both Lincoln and Whitman—or both “art” and “polity”—at least on Grossman’s account—confronted a culture that lacked an effective structure for handling “the mutually excluding legitimacies” that had claims on the consciousness of the nation: the declaration and constitution, equality and order, body and soul. And with both thinkers the justification of union—and the “legitimation of personhood”—was based on the justification of a particular mode of discourse.

Grossman’s account elucidates the deep relationship between these thinkers’ form and content. His claim is ultimately that Lincoln and Whitman’s justifications of Union were inextricably tied to their modes of discourse: law and logic; poetry and presence. But here I would like to suggest that Melville offers us an alternative that both troubles and triangulates the elegant binary that Grossman constructs, or the seemingly perfect pairing between the structure of Lincoln’s legal logic and the fantasy of Whitman’s poetic presence.

4 Grossman, “The Poetics of Union,” 188, 190, 202
6 Grossman, “The Poetics of Union,” 187. This is, of course, an older reading. But in 2013 Priscilla Wald described Grossman’s essay as “magisterial” thanks to the ways he invites contemplation about “how and why the lessons of poetics might translate into a deep understanding of the nature of political existence”—and how this essay treats language not as an infamous “prison house” but, instead, as a “communicative possibility and challenge.” Ultimately, for Wald, “Grossman elucidates the pleasure of myth” not as “dangerous fiction” but as “powerful stories of collective identity.” Priscilla Wald, “Conjunctive Relations,” J19: The Journal of Nineteenth-Century Americanists 1, no. 1 (April 22, 2013): 16-17. And in 2009 Martin Griffin took on Grossman’s essay asking the same question about where Melville fits. His conclusion is that “on the map formed by the overlay of the poetry of policy” Melville “has a more difficult task of finding a place.” Here Griffin points to Grossman’s suggestion that it’s impossible to make just any poem or any policy because of the structure of the social world that resists it. He views Melville’s work as being fated for a marginal position in postwar culture because of its lack of fitness with the social world. Martin Griffin, Ashes of the Mind: War and Memory in Northern Literature, 1865-1900 (University of Massachusetts Press, 2009), 85-86. So in its own way this may not be untimely.
7 Grossman may suggest this. At least he names Melville as a thinker who addressed “the same problem of the union or connectedness of the human world” and who worked towards a “reconstructive poetics.” But he gives absolutely no hint of what his reading of Melville was. Grossman, “The Poetics of Union,” 184.
Melville’s work is different because he begins with an ontological assumption that we are fused together. And when we take fusion as our starting point, particular interactions are what matter. Put directly: Melville’s goal isn’t to create Union, or some stable polity. Instead he deals with relations within a common world. To turn to Melville’s language: there’s no need to construct a “Union” when “the precise situation of every mortal that breathes” is to be “merged,” as by a monkey-rope, in “joint stock companies” of mutual dependence. Instead, there is a pressing need to find some sort of equilibrium. So while Grossman admirably frames Lincoln and Whitman as a set of beautifully complementary opposites, turning to Melville reminds us that both Lincoln (with his rational actors) and Whitman (with his emphasis on types) deal with “equality” and “Union” in ways that are remarkably abstract.\(^8\)

Melville, I am suggesting, does something very different. As I’ve discussed in detail we find a genuine attempt in his work to think about “humans” in terms of collections of elements or “subtle agencies” instead of abstract, exchangeable, components. The last chapters of this project have described the ways that Melville’s treatment of bodies as networks or “incorporations” undermine anything resembling the concept of the autonomous, atomic agent. But this chapter engages with the way that Melville’s “persons” are always collectives that are held in place by a series of analogically linked “cases,” or binding investments: a term that ultimately links his jackets, coats of paint, names, cases, and contracts. These cases are always exceeded by the fluctuation inherent in Melville’s perpetual material circulation. And at the end of the day they also serve as “dead letters” that can only have a real effect through the readers that interpret them.

\(^8\) Both of these readings notably make “persons” that are empty, passive functions. Lincoln’s abstraction is pretty clear, but Whitman’s abstraction may be more contentious. After all Peter Coviello writes beautifully about Whitman as the Poet of attachment. But when we realize it is attachment specifically to—or intimacy with—“someone you haven’t met,” this attachment is to an imaginary. Peter Coviello, “Intimate Nationality: Anonymity and Attachment in Whitman,” American Literature 73, no. 1 (2001): 85. Grossman finds that both Lincoln and Whitman are both “profoundly conservative figures” who “bind the world” to one cultural instrument. And here his justification is that “the Whitmanian voice, like the slave, is uncanny—a servant of persons, but not itself personal—a case of delegated social death.” Grossman, “The Poetics of Union,” 184.
As I mentioned in this project’s introduction, Melville begins White-Jacket with a “Note”: “My man-of-war experiences and observations are incorporated in the present volume.” Then he tells a story, presumably about being on a man-of-war, subjected to the Articles of War and their “everlasting suspension of the Habeas Corpus.” What he’s lost, it seems, is his right to his own body, since he joined the Navy. But—as this project has argued—Melville challenges the idea that there is a stable body that could ever be possessed—or a subject to possess it. And we can also read this prefatory note a second way: when White-Jacket’s “man-of-war experiences” are “incorporated in the present volume,” White-Jacket “is” the man of war united into one “person” by the book jacket that bears his name. In fact, “White-Jacket” is ultimately both the representation of a collection of “atoms” and the collection of letters within his book jacket, simultaneously constructed by his white skin, his jacket, his name, and legal mandates about what it means to be a “person.” It’s as if Melville reads the new idea of corporate persons back onto individuals, recognizing the point John Dewey will eventually make more than fifty years later in “The Historic Background of Corporate Legal Personality”: the corporate person reminds us that “the person” is ultimately a legal entity and nothing more. In fact, the category only captures “a right-and-duty bearing unit,” which can be discerned at a number of levels.

White-Jacket introduces himself by introducing his “incorporation” in “the present volume.” Then he shifts, almost immediately, to the way that jacket fails to actually be impermeable. “Me? Ah me!” he tells us, “soaked and heavy, what a burden was that jacket to carry about,” such that in climbing aloft, not on but in my own proper person, did many showers of rain reascend toward


11 Dewey begins: “For the purposes of law the conception of ‘person’ is a legal conception; put roughly, ‘person’ signifies what law makes it signify.” Then he talks through other accounts and the ways that they are also tautological, or based on their initial assumptions. John Dewey, “The Historic Background of Corporate Legal Personality,” Yale Law Journal 35 (1926 1925): 655. Forthcoming work by Peter Jaros will discuss Melville’s interest in the idea of corporate personhood in detail, with an emphasis on Melville’s The Confidence-Man. And the idea of a “corporate person” had been an issue to be reckoned with since Trustees of Dartmouth College v. Woodward in 1819, when the U.S. Supreme Court recognized corporations as having the same rights as natural persons to create and to enforce contracts.
the skies, in accordance with the natural laws.” In short, he was literally or atomically reconfigured by the rain: a fluctuating human body that could not be captured in any stable way. White Jacket does valiantly attempt to make his jacket “thoroughly impervious” to the weather by adding coats of black paint. But he learns that he has been excluded from the ontological security that they might offer. “The paint-pots were banned, and put under strict lock and key.” “Brush” the appropriately named “captain of the paint-room,” denied him, leaving him with a jacket that was “well-patched, padded, and porous.”

Here White-Jacket also tellingly adds that if he were able to access this paint his attempt to coat and protect himself would still be a total failure: his chemical fluctuation cannot be stopped by ink. He eventually explains: “this jacket of mine, undergoing so many changes, needs to be painted again and again, in order truly to present its actual appearance at any given period.” And White-Jacket openly conflates his writing with painting, as when, for example, he writes: “Let us forget past chapters, if we may, while we paint less repugnant things.” He is writing, it seems, about the ways that language never captures its ever-shifting objects. Instead it only adds to them, contributing more layers to the history of their “meaning.”

This chapter considers the ways that both the law and narrative always fail to fully capture these shifting human bodies, whose compositions inevitably elude any stable definitions or portraits. Put another way, Melville’s material humans—in circulation—resist any incorporation as legally defined identities or persons. And—beyond that—Melville tends to relate this rejection of personhood to the “problem” of race in America, as we see in the way that White-Jacket describes his jacket: “Most monkey jackets,” he tells us, “are of a dark hue.” But “mine, as I have fifty times repeated, and say again, was white.” So on “long, dark nights” others “went skulking and ‘sogering’ about the decks, secure from detection—their identity undiscoverable.” But, White-Jacket makes sure we know, “my own hapless jacket forever proclaimed the name of its wearer.”

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12 Melville, White-Jacket, 4-5.

13 Melville, White-Jacket, 201, 386.
In case this account that he stands out as an individual because of his white skin isn’t perfectly clear, he adds, even more directly, that it was “easy” in “that mob of incognitos,” or “unknowns,” “to individualize ‘that white jacket.’” And that move to individualize him meant that the officers recognized, selected, and addressed him. In response he claims that he would “scour the deck” to give his jacket “a tawny hue.” And he repeatedly asked for “paint” in hopes of adding “pigment.” But ultimately he could not stop from standing out as a different kind of “individualized” person.\(^\text{14}\)

This chapter is ultimately about two related intellectual ideas: the kind of cosmopolitan hope that Melville grounds in nineteenth-century scientific narratives—or his interest in “natural law”—and Melville’s related resistance to names, labels, laws, and any permanent incorporation. For Lincoln secession was inconsistent with law, or a violation of the Constitution. But Melville—like Thoreau, who famously declares, “I, Henry Thoreau, do not wish to be regarded as a member of any incorporated society which I’ve not joined”\(^\text{15}\)—questions his assumed incorporation, along with the efficacy of having any binding contracts at all (legal, financial, or social). Instead Melville repeatedly emphasizes the importance of “contact” over “contracts.” Contingent material interactions and exchanges—often represented by clasps and squeezes of hands (i.e. handshakes)—always seem to be more meaningful and more effective than contracts. I make this point about Melville’s interest in “contact over contracts” by turning to his preoccupation with joint-stock companies, his rhetoric of political fusion, and his telling insistence, in “DuPont’s Round Fight,” that “Union” isn’t “Unity.” And I explain that, in Melville’s work, this interaction-based ontology has a clear payoff: dynamic interactions between actors that precede linguistic categories also precede contracts, legal rulings, and any other governmental structures—including “democracy” and concomitant notions of autonomous “agency.” The bottom line with these atomic collections

\(^{14}\) Melville, White-Jacket, 120-121.

\(^{15}\) Thoreau explains that the government is best which governs not at all, but he’s willing to settle for a better government, based in the individual and universal conscience of “men first and subjects afterward.” He explains: “A corporation has no conscience; but a corporation of conscientious men is corporation with a conscience.” Melville arguably responds in Pierre when, he explains, “plagiariz[ing] from his own experiences,” that “corporations have no souls.” (I do plan to learn more about legal debates over corporate personhood in the nineteenth century).
is that they are interaction-based, not conceptual or textual. They work only with contact, as opposed to contracts. So ultimately Melville’s descriptions of augmentation undercut any notion of the stability of state (and State) that we might hold. Melville’s actants free themselves from the strictures of government, or “expatriate [them]selves to nationalise with the universe,” are “fuse[d] into the universe of things,” and find themselves “involuntarily submitting to that natural law which ordains dissolution equally to the mass, as in time to the member.” Then in the midst of that “natural” process they are poured into “one cosmopolitan and confident tide.”

But these groups also have the capacity to self-organize, like crystals—or the emergent living creatures that I discussed in my last chapter. I conclude with these crystals.

But this story of organic communities that resist legal labels is also a story about language. In *The Confidence-Man* “characters” go nameless because of Melville’s anxiety about the relations between types and tokens, and, more specifically, the legal, economic, or political bias that all tokens, or linguistic labels, smuggle in. And my argument is that in both *The Confidence-Man* and “Bartleby,” “meanings” are portrayed as always-already being constituted or constructed, such that applied labels, or identities, are continuously changing. They appear and change, of course, within networks, such that things we consider to be economic, political, legal, and social are actually inextricably intertwined. But Melville calls our attention to the fact that “characters” are “made” only when they appear (in type) as participants in types. They either “are” or possess particular predicates. But neither abstraction from those predicates, across time, or justification for those connections are part of their existences as such. Ultimately the groups that I describe as Melville’s extralegal courts—and his deregulated “judges” or readers—will craft opinions and, eventually, deliver a verdict—which will become precedent and continue to unfold.

Melville’s turn to organic models of material content also applies to language. The “dead letters”

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17 Melville, *Piazza Tales*, 103. My interest is in *The Confidence-Man*’s treatment of the relationship between experience and names, or linguistic labels. I draw on “Bartleby” as well, because it serves as a useful and more manageable example. Beyond that, these questions shed light on this popular story’s relationship to legal questions, which seems to have been elided for the more blatant legal critique in “Benito Cereno.” “Bartleby” precedes that famous legal commentary in *The Piazza Tales*, and it is a relevant precursor.
of most legal documents work against the perpetual circulation of Melville’s beloved “natural law” and cannot represent life or dynamics. (Linguistic cases never capture). But language used not to somehow allegedly be as “unobliterable as the sea” but to be interpreted and amended and used in the processes of meaning and judgment that are perpetually unfolding seems far more successful.  

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Melville’s Joint-Stock Companies

In his remarkable discussion of Starbuck in the chapter “Knights and Squires,” Ishmael makes an unsurprising declaration that “men may seem detestable as joint stock-companies and nations.” But he had already offered a fantasy of something very different: that Queequeg “seemed to be saying to himself: ‘It’s a mutual, joint-stock world, in all meridians. We cannibals must help these Christians.’”¹⁹ That contrast leaves us with an apparent paradox, which raises a central question: are Melville’s joint-stock companies detestable? Or are they utopian?

The answer seems to be in Melville’s shifting hyphens. In the first example, Melville’s men seem detestable as “joint stock-companies and nations.” Here Melville’s hyphen between “stock” and “companies” grammatically unites the idea of corporations. And this seemingly “detestable” condition is specifically described in opposition to man in the “ideal,” which is “noble” and “sparkling.” Meanwhile Ishmael’s “mutual joint-stock world” has a hyphen between “joint” and “stock.” This emphasizes joining together and sharing together. And, in fact, three chapters earlier, Queequeg divided his money with Ishmael without developing anything resembling a formal or contractual agreement.²⁰ Here ultimately property seems to be the problem. “Stock-companies,” we learn, may take away man’s “sparkle.” But when friends join together to hold all things in common, we’re left with a “mutual,” idealized “joint-stock world.”

¹⁹ Melville, Moby-Dick, 117, 62.

²⁰ “After supper, and another social chat and smoke, we went to our room together. He made me a present of his embalmed head; took out his enormous tobacco wallet, and groping under the tobacco, drew out some thirty dollars in silver; then spreading them on the table, and mechanically dividing them into two equal portions, pushed one of them towards me, and said it was mine. I was going to remonstrate; but he silenced me by pouring them into my trowsers’ pockets. I let them stay.” Melville, Moby-Dick, 51.
This may, of course, seem overstated. Melville, as we know, wasn’t always able to be a precise, careful, slow writer. But his resistance to contractual nations is incredibly clear as early as *Typee*: “there were none of those thousand sources of irritation that the ingenuity of civilized man has created to mar his own felicity. There were no foreclosures of mortgages, no protested notes, no bills payable.” Instead these formal financial contracts are the marks of “civilization” that ruins a non-contractual state so ideal that Melville cites Rousseau.

*Typee* also makes use of this “joint-stock” motif in a way that clearly resonates with Ishmael’s fantasy of a “joint-stock world.” Tommo explains: “whether the land of the valley was the joint property of its inhabitants, or whether it was parcelled out among a certain number of landed proprietors who allowed everybody to ‘squat’ and ‘poach’ as much as he or she pleased, I never could ascertain. At any rate, musty parchments and title deeds there were none on the island.” So when Tommo thinks of the island as utopian—in the moments between his sensationalized anxiety about cannibalism and his stereotyped desires to return to “home” and “mother”—he cares about the commons. In fact, both “joint property” and the “mutual joint-stock world” are explicitly contrasted with problematic “nations,” “money,” and their title deeds.

This particular moment in *Typee* offers a coded message that suggests it is also about indigenous populations in the allegedly “United States.” In the sentence after he frames the island as a place free of both “musty parchments and title deeds”—free of an illegitimate Constitution

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21 For discussions of Melville’s sense of being rushed and pressured by the need for more time—or, perhaps, “Time, Strength, Cash, and Patience”—see, for example, Elizabeth Renker, *Strike through the Mask: Herman Melville and the Scene of Writing* (Baltimore: Johns Hopkins University Press, 1996).

22 This citation even arises one page later, amidst a discussion of the "continual happiness" that "appeared to prevail in the valley, sprung principally from that all-pervading sensation which Rousseau had told us he at one time experienced, the mere buoyant sense of a healthful physical existence.” Melville, *Typee*, 127. But the passage from Rousseau that also seems to shape this passage is his most famous claim: “the first man who, having fenced in a piece of land, said ‘This is mine,’ and found people naïve enough to believe him, that man was the true founder of civil society.” Jean-Jacques Rousseau, *Discourse on the Origin of Inequality* (Mineola: Dover Thrift Editions, 2012), 27. To be direct: Melville turns to Rousseau because he recasts the divide between civilization and savagery as being, ultimately, about a contrast between property and the communal.

23 For powerful ways of questioning the legitimacy of a Constitution somehow called into being by “the people” who were not yet credentialed see “Neither Citizen Nor Alien” in Priscilla Wald, *Constituting Americans: Cultural Anxiety and Narrative Form* (Durham: Duke University Press, 1995) and Christopher
— Melville continues, “I am half inclined to believe that its inhabitants hold their broad valleys in fee simple from Nature herself; to have and to hold, so long as grass grows and water runs.” This reference to “fee simple” is to a legal term that denotes complete ownership, without any limitations or conditions, or absolute ownership. In short, their right to the property comes from “Nature,” or from Melville’s “Natural law.” Ownership is not and cannot be derived from written legal documents. And its term is natural and perpetual: “so long as grass grows and water runs.”

References to time defined in these “natural” terms—“as long as Grass grows or water runs”—are references to Indian Removal. They are, more specifically, references to Andrew Jackson’s instructions for the military representative sent to promise his Choctaw and Cherokee “children” that with the extension of the “law” of the State of Mississippi their “father” could not prevent them from being subject to its laws. So as their “friend” his goal was to remove them from the State of Mississippi—and from the limits of any State. Instead they could be “in possession of land of their own,” which they would “possess as long as Grass grows or water runs.” This stunningly condescending, paternalistic offer to be “their friend and father” was paired with a total betrayal that was, not surprisingly, “recalled with bitterness by generations of Indians.”

While Melville could not have accessed the long afterlife of this phrase he clearly had a sense of how things would unfold when he offered, in Pierre, that “in England an immense mass of state-masonry is brought to bear… in upholding the hereditary existence of certain houses.” But in the United States “nothing of that kind can possibly be admitted,” even with hundreds of New England families who “might easily trace their uninterrupted English lineage.” Ultimately the owners of their “magnificent” “manors” engaged in “haughty” rent collection from “their


thousand farmer tenants, *so long as grass grows and water runs.*” And after this problematic but intriguing comparison of the forced exodus of Native Americans to the exploitation of impoverished tenants Melville pointedly tells us that “so long as grass grows and water runs” “hints of a surprising eternity for a deed, and seems to make lawyer's ink unobliterable as the sea.” In short: Melville recognizes and directly rejects attempts to give legal documents the status of “natural law.” In fact in *Pierre* this reference Melville began to work through in *Typee*—with its bitterness towards both missionaries and colonialism —is transformed from a rejection of settler colonialism to an objection of all forms of legal ownership, which he frames as unnatural. (In short: “so long as grass grows and water runs” is a problem only after the “lawyer’s ink,” which should not be given and which cannot have the same status as the “sea,” which, we know, “permits no records”).

This “joint-stock” trope appears for a third time back in *Moby-Dick.* In “The Monkey-Rope,” as I’ve mentioned, Ishmael finds himself tied, precariously, to Queequeg. And here Melville offers a different vision that captures the danger and the organic possibility of non-contractual community: “I seemed distinctly to perceive that my own individuality was now merged in a joint stock company of two... the precise situation of every mortal that breathes; only, in most cases he, one way or other, has this Siamese connexion with a plurality of other mortals.”

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25 In the next paragraph Melville notably repeats both the phrase “as their own grass grows, long as their own water shall run” and the idea of “fee-simples.” And this passage notably follows almost directly from the discussion of the “vulgar caldron of an everlasting uncrystalizing Present” that allegedly drives the “social condition” of America, which supposedly draws on its lack of any “chartered Aristocracy” to imagine a world shaped by “all-fertile Nature itself,” or where “Death itself becomes transmuted into life.” I discussed this passage in detail in my second chapter. Melville, *Typee*, 11, 9.

26 Rachela Permenter offers a similar sentiment: “At a time when it was dissident to do so, Melville made many veiled objections to America's policies of slavery and the extermination of the country's tribal people.” We see this in his references to Native Americans’ dispossession and to “Jackson's empty promise to give them their land ‘so long as grass grows and water runs.’” And this becomes even clearer in *The Confidence-Man’s* chapter on “Indian Hating.” Rachela Permenter, “Romantic Philosophy, Transcendentalism, and Nature,” in *A Companion to Herman Melville*, ed. Wyn Kelley (Oxford: Wiley, 2015), 278.


28 Melville, *Moby-Dick*, 320. Melville also used remarkably similar language in a letter to Richard Henry Dana in 1850, when he wrote: “were I inclined to undue vanity, this one fact would be far more to me than acres & square miles of the superficial shallow praise of the publishing critics. And I am specially delighted
intentionally ambiguous. And it has no hyphen. “Companies” may reference the mutually pleasurable interactions with others, from Ishmael and Queequeg’s “bridegroom clasp” to moments of blissful contact like “A Squeeze of the Hand.” in fact, many of Melville’s most memorable moments of unexpected contact take the form of unwritten contracts: the handshake. Meanwhile problematic alternatives are, not surprisingly, framed in financial or contractual terms: “another’s mistake or misfortune might plunge innocent me into unmerited disaster and death,” which is a common anxiety surrounding partnerships. Or financially: “if your banker breaks, you nap.” And these are “dangerous liabilities which the hempen bond entailed.”

Amy Parsons offers an especially helpful reading of this passage when she points out that “the examples Ishmael selects are not in fact the conditions of every mortal, but only mortals engaged in relations of capital, the accumulation of wealth (banking), or the exchange of commodities (pills).” In fact, Parsons explains, “in the passage, the most genuine danger lies in the abstractions of the marketplace rather than in direct physical connection. Ishmael’s metaphors in this scene are inadequate precisely because the men on deck are not laboring at a distance from each other like bankers and pharmacists. Rather, their unmediated physical proximity allows them to administer physical care in one way or another.” Or as I’ve framed it, Melville values contact over the abstracted distant connections produced by contracts.
It’s almost trivial to suggest that Melville is not a supporter of contractual transactions. But it is still helpful, I think, to recognize the degree to which he sets nation, corporation, and destruction against an idealized “joint-stock” world that he pairs with his own motivation and “congenial feelings.” This phrase and sentiment potentially even dates back to Melville’s father, who wrote a letter to his brother, Peter Gansevoort, that described “reducing all to a common level, or a kind of universal joint stock company.” That “kind of Equality in Commerce” was “beautiful” at least “in theory.” And yet this fantasy of “reducing all to a common level”—however beautiful—prompts an important question. What could that world look like? Put directly: if contact leads to acceptance and a kind of fusion, then what, exactly, are those fusions?

My second chapter considered the fusions that somehow at least supposedly constructed living bodies and even human minds and souls through a process of emergence. But this chapter considers the ways that Melville’s dual ideas of circulation and emergence might construct a social world, not with “unnatural” and “unobliterable” language but with the organic reassembly of material atoms, elements, citizens, and nations—and the language that temporarily describes them. In a world where subtle agencies exceed any legal or allegedly stable linguistic accounts, Melville’s language is also meant to fluctuate over time—and across perspectives.

Melville repeatedly offers moments that suggest actual fusion of objects, persons, and nations. Redburn envisions “American blood” “made up of a thousand noble currents all pouring into one,” then continues: “we are not a nation, so much as a world.”

“Two Years Before the Mast”, and while so engaged was, as it were, tied & welded to you by a sort of Siamese link of affectionate sympathy.” He is “delighted” to have learned “that these feelings should be reciprocated” by the person. And yet, his reading of the distance prose still produced a real connection. Herman Melville, Correspondence (Evanston: Northwestern University Press, 1993), 160.

32 For both the contents of this letter and an interesting discussion of Allan’s skepticism and his struggle with the “more democratic” New York—as opposed to “aristocratic Boston” see Wyn Kelley, Melville’s City: Literary and Urban Form in Nineteenth-Century New York (Cambridge: Cambridge University Press, 1996), 34.

currents “forming into one federated whole” as if, Union were both made and centralized. But this construction isn’t historical or related to an attempt to create a stable future. Instead, according to this vision, Americans are always-already made of a thousand different currents, which are still pouring or forming: a kind of perpetual reassembly of what comprises “America” specifically without forming a nation. Instead of Lincoln and Whitman’s abstractions Melville offers a perpetual (re)construction that is immanent to its world.

White-Jacket offers a vision that is even more expansive: “a very fine feeling” “fuses us into the universe of things, and makes us a part of the All.” This idea of becoming “part of the All” may be problematic. In fact just one year later Melville famously calls this “all feeling” into question by offering—in a letter to Hawthorne—that “mischief” troubles the truth when “men” “insist upon the universal application of a temporary feeling.” And yet, being “part of the All” or “the universe of things” is very different from the experience of a kind of “all feeling.” (The first is ontological; the second is epistemological). And this fusion into “the universe of things” ends with a declaration to this effect: “we expatriate ourselves to nationalise with the universe.”

This expatriation—or residence in a place where one is not a citizen—is framed as nationalizing. So this loss of citizenship is concomitant with becoming part of a new aggregation not of people or of citizens but of the “universe”: the entire set of matter in the cosmos. Here “matter” seems to be the very thing that is held in common. And this fusion into the “universe of things” supplements my account of perpetually shifting selves that always-already leave themselves and bond with the material world that surrounds “them.” Put another way: material circulation isn’t limited to Ahab or to White-Jacket amidst their respective storms. And for Melville these changes undermine both “federation” and “nation.”

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34 Herman Melville, White-Jacket, 76.
35 Herman Melville, Correspondence, 194.
36 Melville, Herman. White-Jacket, 76.
Melville’s idea that we “expatriate ourselves to nationalize with the universe,” in a way that “fuses us into the universe of things” and makes a new but ever-shifting “federated whole” is even clearer by Melville’s *The Confidence-Man* in 1857. There we find a “crowd” described as “a piebald parliament” with “no lack of variety” that “disintegrated,” “involuntarily submitting to that natural law which ordains dissolution equally to the mass as in time to the member.” 37 Obviously these crowds dissolve, but Melville also turns to “natural law” to claim that the “persons” who compose these crowds also dissolve. And as I mentioned in my introduction, *dissolution* is a fascinating word choice here: bodies break into their constituent elements, and legal entities cease to exist. On the eve of the Dred Scott decision, at the confluence of the Missouri and Mississippi rivers, we find a text about non-persons who operate without legal structures. Melville goes on to describe the “all-fusing spirit of the West, whose type is the Mississippi itself, which, uniting the streams of the most distant and opposite zones, pours them along, helter-skelter, in one cosmopolitan and confident tide.” 38 These “members”—and not *citizens*—somehow join together, “united” not as federated nations but as part of a “cosmopolitan” or diverse and nationally unrestricted tide.

Finally, we see another “joint-stock” merger that is also about the status of *nations* with *Israel Potter’s* “co-partnership and joint-stock combustion-company.” We read: “the belligerents were no longer, in the ordinary sense of things, an English ship and an American ship. It was a co-partnership and *joint-stock combustion-company* of both ships.” Here the reference to a “combustion-company” points towards a merger based specifically in chemical recombination. 39 That model imagines elements shifting the boundaries of “nation.” This image—Melville’s final “joint-stock” scene—is from *Israel Potter. The Confidence-Man*, published the next year, is even more forceful and explicit in its dual challenge of persons and nations, legal and linguistic labels.

Dead Letters; Living Readers

One of the central and overlooked questions posed—or perhaps challenges raised—by Melville’s *The Confidence-Man: His Masquerade* is: who is allowed to testify? Or, more aptly, who produces legal and conventional “meaning” that seems to be both metaphysical and false, real and true? And how are we to move from lists of physical characteristics, material coverings, or professional practices to identities and meanings? An “auburn-haired gentleman” speaks to his “neighbor with a hook-nose,” we follow “the man with the traveling-cap,” and we meet the alleged “president and transfer-agent” “officially connected with the Black Rapids Coal Company.”

But interestingly enough, *none of the characters in this novel have names.*

Peter Bellis situates the problem of identity in this work as an epistemological one, when he explains that “again and again, Melville’s dialogues reveal the unreliability of any possible ‘evidence’ of identity, whether physical or verbal.” And while I think this is accurate, it also seems to be the wrong frame for considering this text. Rachel Cole suggests, instead, that we ought think about ontology. She offers: “critics have overlooked the extent to which Melville’s confidence-man challenges the identity model of personhood itself” and that, for Melville, a character’s “depth is indistinguishable from the preferential appreciation offered him by others. Underneath his surface lie the feelings of people outside of him, to such an extent that it becomes

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40 Herman Melville, *The Confidence-Man: His Masquerade* (Evanston: Northwestern University Press, 1984), 89-92, 64, 47.

41 There are three potential exceptions to this rule, but each of them seems to be quite allegorical. First, we have the “boon companions”: Frank Goodman and Charlie Noble. But one has just acted “frankly,” and the other has just declared that friendship at first sight is “noble.” And we also have Pitch, who gives his name along with the tag line: “my name is Pitch; I stick to what I say.” Melville, *The Confidence-Man*, 137, 101.

implausible to describe him as having a self at all.”43 Cole is exactly right to suggest that Melville both calls the self into question and privileges readings over meaning inherent in texts. But with this descriptive account we still have to wonder why Melville would represent characters as being constructed by readers. I would like to begin to provide an account of that unexpected choice, with an account of Melville’s rejection of “the letter of the law,” along with his insistence on interpretation that is grounded not in judges but in distributed juries.

In both The Confidence-Man and in “Bartleby, the Scrivener,” Melville decontextualizes the legal process, removing trials, judges, juries, and even attorneys from courts. This makes “the law” visible as a collection of particular conventions, with slight variance. And why not? What common law’s inquest and convention share, after all, is that decisions about meaning are produced outside the letter of the law, primarily according to precedent. My suggestion, here, is that for Melville meaning is an inevitable and continuous construction, that process is collective, and our labels are abductions that will continue to change. And given that model his imperatives, I think, are to invite change—and to acknowledge a multitude of contributions.

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The inquest began as an inquiry conducted by royal officials, who would summon the leading men of a neighborhood and require them, under oath, to present desired information about property. Over time, as official local courts were unable to force malefactors to submit to their jurisdiction, the royal-mandated inquest expanded to include criminal charges. Then members of the inquest went from being local residents, able to witness, to impartial community members who heard testimony from other witnesses. But these jurors were not asked to comment upon guilt or innocence. Their accusations were only indictments, with trials to follow.44


By the time *The Confidence-Man* was published in 1857, these inquests had developed into grand juries, or groups with jurisdiction over decisions about whether there is enough evidence, or “probable cause,” for a trial. They could not lead investigations. But they were able to question witnesses—privately and discreetly—in order to evaluate their evidence. These juries prevented unjustified, malicious, or politically motivated prosecutions. Finally, inquests were and still are specific to common law: cases in which decisions depend on precedent and will apply to future cases, since there is no adequate, authoritative statement for them in the letter of the law.

The inquest—which finds its way into the title of *The Confidence-Man*’s eighteenth chapter, “Inquest into the true character of the Herb-Doctor”—is first invoked in the work’s third chapter. There a man with a wooden leg claims that the so-called “Black Guinea”—an allegedly crippled, allegedly black man—doesn’t actually have a disability. Instead he is part of a “sham, got up for financial purposes.” Luckily for the character—who may or may not actually be a Black Guinea—the crowd took his side, chasing his accuser away. Here Melville offers:

> So he with the wooden leg was forced to retire; when the rest, finding themselves left *sole judges in the case*, could not resist the opportunity of acting the part: not because it is a human weakness to take pleasure in sitting in judgment upon one in a box, as surely this unfortunate negro now was, but that *it strangely sharpens human perceptions, when, instead of standing by and having their fellow-feelings touched by the sight of an alleged culprit severely handled by some one justiciary, a crowd suddenly come to be all justiciaries in the same case themselves*. Here each individual finds that he or she is solely accountable for his or her own judgment. So as individuals within a crowd they cannot *not* step in to judge. Instead, they each begin to judge one case together. And their collaboration, it turns out, “strangely sharpens human perceptions.” Here Melville begins to suggest that when rulings must exceed the letter of the law—or when judgments must exceed empirical “facts”—they should require juries.

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46 Holmes, Oliver Wendell. *The Common Law*.
We see the troubling alternative—just “one justiciary”—with Melville’s fictional attorney in “Bartleby, the Scrivener.” He was a Master in Chancery: the state’s highest-ranking legal officer, able to extend or even go against state legal code. Bartleby allows us to bear witness to his judgments, which seem questionable at almost every turn. And this may be one reason we learn, in the story’s third paragraph, that a constitutional change had eliminated his position.48 This reform is a very real part of New York’s history. Chancery court was “closely associated with executive power,” and it was designed to move quickly: “there was no need for trial by jury.”49 But in 1846 the New York State Constitutional Convention reorganized the State’s judicial system. And in 1847—just six years before “Bartleby” was published—the responsibilities of the attorney’s problematically unilateral position were transferred to the New York Supreme Court. The language of the Convention clearly pushed back against leaving fate in one person’s hands, proposing “the abolition of the present court of chancery” specifically in order to enable “the distribution of its powers.”50

This “jury” in The Confidence-Man easily could have become a kind of mob. And, in fact, Melville acknowledges the possibility, offering that “in Arkansas once,” a group who felt a guilty verdict was “unjust” “recused” the accused “to try him themselves; whereupon they, as it turned out, found him even guiltier than the court had done” and took him to the gallows. But here Melville explicitly offers a very different model. He writes: “but not to such extremities, or anything like them, did the present crowd come.” They put “the negro fairly and discreetly to the question.” And they ask him whether he has any “documentary proof,” or “plain paper about him, attesting that his case was not a spurious one.”51 In short: they offered a strange sort of inquest.

49 Lawrence Friedman, A History of American Law, Revised Edition (Simon and Schuster, 2010), 55, 556;
Despite the seemingly reasonable behavior of this “jury,” this request for “plain paper” or “documentary proof” seems inappropriate. After all, the question of whether “his case was not a spurious one” is ultimately a question about whether he is who he says he is or a “sham,” “rascal” and a “black Jeremy Diddler.”\textsuperscript{52} And it is asked, specifically, in the 1850s at a dock in St. Louis—or at the confluence of the Missouri and Mississippi rivers. Dred Scott’s attempts to sue for his freedom also began in St. Louis. And \textit{Scott v. Sandford} was, without question, the most important “Grand Inquest” surrounding \textit{The Confidence-Man}’s publication. That inquest’s famous ruling was, of course, that there was no such thing as United States citizenship, defined by the Constitution and separate from state citizenship.\textsuperscript{53} Its outcome was that Scott could neither legally file suit nor testify for himself. This case was an inquest exactly because there was no trial. Instead it was about the conditions of the possibility for trial in the United States. And according to Chief Justice Roger Taney, Dred Scott did not meet them.

Taney may not have delivered \textit{Scott v. Sandford} when \textit{The Confidence-Man} went to press. Scott’s attempt to be awarded citizenship was rejected on March 6th, and Melville’s book on confidence and judgment was released on April 1st, 1857. But even so, Melville was almost certainly aware of the case before its publication. It had been on the Supreme Court docket for three entire years. It was covered in the press.\textsuperscript{54} And Dred Scott’s situation helps make sense of both the Black Guinea’s questionable need to procure papers and the way that things are reversed: the accuser should be the one to show that his case is “not spurious.” But the Black Guinea is not being asked not to defend himself. He is being asked to make a “case” for his “identity.”

\textsuperscript{52} Melville, \textit{The Confidence-Man}, 14, 16. For “diddler” as a term for a confidence man see, for example, Edgar Allan Poe, “Diddling Considered as One of the Exact Sciences,” in \textit{Poetry and Tales}, ed. Francis Quinn (New York: The Library of America, 1984), 607.

\textsuperscript{53} For a brief but very lucid account of both the status of U.S. citizenship as something contingent upon state citizenship and the ways that this “vacuum disclosed by” Scott was corrected in the Fourteenth Amendment, see \textit{Report of the Debates and Proceedings of the Convention for the Revision of the Constitution of the State of New-York, 1846} (Office of the Evening Atlas, 1846), 227-228.

The Black Guinea fares better than Dred Scott when he could not offer authoritative papers, documentary proof, or legal documents. While his word was insufficient as “bond,” his “inquest” does, at least, continue. The jurors ask him for a witness: “but is there not some one who can speak a good word for you?” This he can provide. He gives us a list of the characters most critics think of as the manifestations of the confidence man. And this leads us to the obvious question: why take their word for it? Or what makes “a ge'mman wid a big book” or a “yaller vest” more credible as a witness? Presumably it’s not the Black Guinea’s account of the eight other “good, kind, honest ge’mmen more aboard what knows me and will speak for me.” He gives the answer as he continues, “as well as dis poor old darkie knows hisself.” The Confidence-Man explicitly raises this question about the ability to bear witness in ways that make it about more than just blackness when we read the skeptical comment that whether “Indians should be permitted to testify for themselves, to the exclusion of other testimony, is a question that may be left to the Supreme Court.” But here we also have to remember that this shipboard trial has nothing to do with a real court. It is—at best—a “court” of public opinion, or something like an unauthorized, non-legal inquest—free of the limits of the letter of the law and its a priori categories.

What we see with the Black Guinea’s “trial” is that extra-judicial situations sometimes operate like courts. Groups of people jointly “decide” what is common, standard, or acceptable.

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55 See William Braswell, “Melville as a Critic of Emerson,” American Literature 9, no. 3 (November 1, 1937): 317–34 for a compelling compilation of Melville’s annotations of Ralph Waldo Emerson’s work, including the line from “Illusions”: “my word is as good as my bond.”

56 The Black Guinea’s list is: “Oh yes, oh yes, dar is aboard here a werry nice, good ge'mman wid a weed, and a ge'mman in a gray coat and white tie, what knows all about me; and a ge'mman wid a big book, too; and a yarb-doctor; and a ge'mman in a yaller west; and a ge'mman wid a brass plate; and a ge'mman in a wiolet robe; and a ge'mman as is a sodjer; and ever so many good, kind honest ge'mmen more aboard what knows me and will speak for me.” Melville, The Confidence-Man, 13. For critical debates about whether these alleged witnesses are all manifestations of the very same confidence man see Peter Bellis’ account that the “standard line” takes the “equivocal characters” as “avatars of a single ubiquitous figure.” Peter Bellis “Melville’s Confidence-Man: An Uncharitable Interpretation,” American Literature, Vol. 59, No. 4 (Dec., 1987): 551. This reading is also spelled out in Watson Branch’s “The Genesis, Composition, and Structure of The Confidence-Man,” Nineteenth-Century Fiction, Vol. 27, No. 4 (Mar., 1973), 424–448.

57 According to the precedent set by Scott v. Sandford, Native Americans would also be prevented from testifying in Court during an inquest. Melville, The Confidence-Man, 147.
We certainly see life operating like court in “Bartleby” when the attorney repeatedly seems to only process information using a pseudo-juridical process and legal language. For example: “But what reasonable objection can you have to speak to me?” Or: “I determined again to postpone the consideration of this dilemma to my future leisure.” In short: he seems to be approaching his interpersonal relationships in and beyond the scope of his legal office as a judge. He even responds to Bartleby as if he has offered a common law ruling in Chancery court: “‘You are decided, then, not to comply with my request—a request made according to common usage and common sense?’ He briefly gave me to understand that on that point my judgment was sound. Yes: his decision was irreversible.”

Then this defrocked judge—like The Confidence Man’s fraudulent “jury” onboard a boat—enforces his decisions as “law,” without any legal backing. In short: this unofficial “common law” seems to resemble “real,” technical, legal common law, at least to the degree that its implementation is ultimately built upon precedent.

As I’ve suggested, this possibility of life being like court is possible because the law is also shaped by experience. As Oliver Wendell Holmes Jr. will famously declare in the introduction of The Common Law:

_The life of the law has not been logic; it has been experience._ The felt necessities of the time, the prevalent moral and political theories, intuitions of public policy, avowed or unconscious, even the prejudices which judges share with their fellow-men have had a good deal more to do than the syllogism in determining the rules by which men should be governed.

Though the law’s “form and machinery, and the degree to which it is able to work out desired results, depend very much upon its past,” Holmes tells us, “the substance of the law at any given time pretty nearly corresponds, so far as it goes, with what is then understood to be convenient.”

For Holmes the law does depend on both language and precedent, but at the end of the day, it is about **interpretation**.

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Perhaps this is why Melville uses decontextualized “law” to get at “life.” He certainly understands the slippery nature of all interpretation, legal and otherwise (cf. “Benito Cereno”). And these extra-legal critiques of the legal system shape The Confidence-Man’s final pages. There the cosmopolitan and an old man are given a counterfeit detector, which our narrator describes in almost exclusively legal terms. The old man, with the “Detector” and “the air of an officer,” began an “examination.” He “prosecuted with no small research and vigilance, and with lawyer-like efficacy” he traced “the evidence, whichever way it might go.” The cosmopolitan mocks him, asking “in a formal voice”: “‘What say you, Mr. Foreman; guilty, or not guilty?’” And in a comic and tragic moment, the old man cannot read it! “I don't know, I don't know,” he exclaims, not surprisingly, “perplexed.” “There's so many marks of all sorts to go by, it makes it a kind of uncertain.””⁶⁰ (So much for any “letter of the law.” We only have interpretation).

I’ve suggested, already, that Melville works through questions that relate to inquest, or what it means to make decisions not about guilt and innocence, but, instead, about what can go to trial. And I’ve suggested that, for Melville, “law” is like “life,” and legal language permeates conventional meaning. So perhaps when Melville’s novel concludes with the non-conclusive “something further may follow of this masquerade” we might respond accordingly.⁶¹ In that case, we would recognize that while the depositions in “Benito Cereno” did not offer anticipated answers or any clarity, a deregulated “inquest” of local readers will craft opinions and, eventually, deliver a verdict—which will become precedent and continue to unfold.⁶²

⁶¹ Melville, The Confidence-Man, 251.
⁶² Melville, Piazza Tales, 103. My interest is in The Confidence-Man’s treatment of the relationship between experience and names, or linguistic labels. I draw on “Bartleby” as well, because it serves as a useful and more manageable example. Beyond that, these questions shed light on this popular story’s relationship to legal questions, which seems to have been elided for the more blatant legal critique in “Benito Cereno.” “Bartleby” precedes that famous legal commentary in The Piazza Tales, and it is a relevant precursor.
In *The Order of Things*, Foucault explains that we are caught between two different ways of using language, or “relating,” that are part of a “rivalry from which we have not yet emerged”—judgment against justification—that will continue “until the connection between language and representation is broken.” The process or use of language is a fluid exchange between labeling particular objects (and thus cutting, removing, and analyzing—that’s the judging) and appealing to categories (as in justifying particular perceived appearances, or the “things” that we have labeled, with forms or concepts). An act of referencing and reifying an alleged object simultaneously makes the “thing” that is named a representation of the concept its name signals.

This idea is already present in Ralph Waldo Emerson’s work: the poet “delights in detachment or boundary.” Any act of “freeing” a perception with a new linguistic label always-already contains a new limit. As he explains in his journals, “To separate & to knit up are two inseparable acts of life” such that we cannot locate “the particular.” Finally, each word signals an ideal, or a perceived “natural object,” which is always-already a symbol, or a sign of a particular mental or representational state. Language must be tied both to us and to our understanding of what is not us (cf. Emerson’s famous “Not-Me”).

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64 To expand my incredibly brief account of Foucault’s discussion of “commentary” (justification) and “criticism” (judgment): Commentary is the part of language (according to the Renaissance *episteme*) that allows a mark to participate in the text that is allegedly below it and that holds its meaning in place. Essentially, it is the form (*idea*), and it formalizes. It allows marks to exceed themselves and to participate in a “great, unbroken plain of words and things” that is a “bringing into being at a level above that of all marks.” It allows individuated words (tokens) to be both the same and different simultaneously—in fact, it even makes it so. Meanwhile, “criticism” (from the “Classical” *episteme*) holds that “language” exists only as a sign (the process/function/activity of language) such that “all that remains is representation, unfolding in the verbal signs that manifest it, and hence becoming *discourse*” (“representation itself represented by verbal signs”). A speech-act references, designates, and individuates an object, but this naming is also a categorizing, which works against its act of individuating. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*. 1970. New York: Vintage Books, 1994, 79-81, 40.

What Foucault offers, beyond Emerson, is that discourse could be evaded if language could be non-representational. And this is the work of “Bartleby,” as Deleuze shows him to us. Melville, as we see in Pierre’s dedicatory letter, rejects his own (somewhat oversimplified) version of Emerson’s theory of language: that knowledge comes through “man’s” physical, individuated, and thus imperfect spiritual intoxication. Instead, he looks to the receipt of “bounteous and unstinted fertilizations,” or generously distributed, productive combinations.66

“Meaning,” for Melville, is not some thing that is either true or false. Instead, it is a creative or generative process that grows and develops. To borrow a concept popularized by Latour, meaning is an assembly or collection. And in that case, we should think of language as something like a poetics of varnish.67 If we insist upon relating “meaning” to some “mute” and “inscrutable” apparent object, we can only speak around it, or thicken its reception. For Melville, there is no natural correspondence between words and objects. To “invest,” it seems, is just to add a coat.

I would like, first, to briefly sketch Deleuze’s reading that Bartleby’s force is in his movement toward escaping representation. Then I would like to expand it with a reading of “Bartleby” that focuses on two points: Melville’s portrayal of Bartleby as a mute, inscrutable text (i.e. mark, separate from interpretation), and the story’s suggestion that “on errands of life” letters either live or “speed to death.” Next, I will move toward Melville’s explicit discussion of this question in The Confidence-Man’s famous fourteenth chapter, which takes on the difference between static, simplified characters and those who are inconsistent, developing, and lifelike.68 And these discussions, together, lead to further discussion about the relationships between life and death, generativity and meaning, interpretation and text.

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67 I borrow “varnish” from the preface of Melville’s Typee: “There are some things related in the narrative which will be sure to appear strange, or perhaps entirely incomprehensible to the reader; but they cannot appear more so to him than they did to the author at the time. He has stated such matters just as they occurred, and leaves every one to form his own opinion concerning them; trusting that his anxious desire to speak the unvarnished truth will gain for him the confidence of his readers. Melville, Typee, 2.
68 Herman Melville, Piazza Tales, 45; Melville, The Confidence-Man, 69-71.
Ultimately, in this section, I will show that for Melville, marks might be dead, or static. But people aren’t. And neither are the “dead” marks that people encounter and interpret. To quickly borrow a strand from *Moby-Dick*—and from my project’s introduction—knowledge is less a thing that can be held than a collection made by “looming.” Readers weave or fill in around words that serve as skeletons. And the most interesting about questioning the relationships between linguistic representation and experience in these two works is that they make claims about not only readers but also the status of mark, text, and *character*.

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Gilles Deleuze’s reading of Bartleby is that he is not “the symbol of anything whatsoever.” The text is “always literal,” so he is what he appears to be: “a gaunt and pallid man.”\(^6^9\) He is lean, “without aspect,” and lacking intensity or color.\(^7^0\) Essentially, Bartleby ultimately does not offer anything that we can grasp. When we stare at him, we may as well be staring at a wall. He is utterly inaccessible as an object or any kind of material entity. But for Deleuze, Bartleby’s *language* takes precedent over his representation of blank physicality. Put another way: Bartleby is, ultimately, his “voice.” And he produces his alleged “formula”—his “I would prefer not to”—at the “very limit” of language, and in a way that we “discover its Outside.” Bartleby’s words are still language, of course. But even as his formula “proliferates” and “contaminates” the other people in the office, it sends “language itself into flight,” such that “neither words nor characters can be distinguished.” When Bartleby takes this phrase as his formula, he must “stop copying” or “stop reproducing words” exactly because they exist in “a zone of indetermination that renders words indistinguishable.” “Beyond the formula, there is nothing left to say: it functions as a procedure, overcoming its appearance of particularity”\(^7^1\)

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\(^{7^1}\) Deleuze, *Essays Critical and Clinical*, 87, 68, 72, 76, 73.
In short: with his formulaic responses, Deleuze’s Bartleby performs an “inarticulate block,” as close to nothingness as any utterance could be. And this has the “same force” as an “agrammatical formula.” “Neither words nor characters can be distinguished.” And this happens because when all speech-acts allegedly meet the same reply, which empties them of referential “meaning.” Bartleby’s formula troubles “the connection between language and representation,” since his words are allegedly the same in all differing contexts. According to Deleuze, Bartleby is literally this deconstructive function: an occasion for recognition of the non-linguistic, which is, by definition, “inscrutable,” and irreducible. And his absolute vocation is to be a man without references.” First, he avoids reference because his formula holds, regardless of referents. And then he is able to evade language because we cannot possibly pin him down, or link him to any particular predicate. Bartleby is “without possessions, without properties, without qualities, without particularities: he is too smooth for anything to hang any particularity on him.”

Deleuze is exactly right when he discusses Bartleby’s evasion of reference. Bartleby is, frequently beyond our ability to predicate, or to make meaningful propositions about his stable attributes. We don’t know what he wants, and we don’t know what he stands for. But Deleuze’s otherwise compelling reading overlooks this story’s remarkable ending. Focus on the final pages of “Bartleby” shows us that Bartleby does—in several moments—use language as a reference. He references objects, he references people, and, of course, Bartleby references his preferences. This means that his inscrutability is not only a factor of his speech or of his alleged “formula.” His words tell us where he stands, on more than one occasion. So it is difficult to support the claim that it works as a “formula” that helps us locate language’s “very limit” or its “Outside.”

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72 Deleuze, Essays Critical and Clinical, 68, 76, 72.
73 Foucault, The Order of Things, 81.
74 Deleuze, Essays Critical and Clinical, 74
75 Deleuze, Essays Critical and Clinical, 68, 72.
Instead, Bartleby’s words puzzle us. They lead us to read or to interpret, to analyze or judge. We look for an account, an explanation, or a point of origin that might, somehow, formalize Bartleby’s resistance to our readings. And in that process, we realize that Bartleby—the figure—is far more inscrutable than any formula. As Deleuze puts it, he—and not only his words—is “too smooth for anything to hang on.”\(^76\) This is the second thing that Deleuze overlooks, when he overlooks this story’s ending: we can’t find meaning in Bartleby because “Bartleby” is \textit{text}. And text, without readers, is nothing but marks, or “dead letters.”\(^77\)

To begin with, near the story’s end, Bartleby breaks his “formula” with explicit references. He answers, for example, that he’s “‘sitting upon the banister.’” And as trivial as that response may seem, it unavoidably links language and reference. Bartleby goes on to directly reference both other people and his preferences. He tells our narrator, the attorney: “‘I know you, and I want nothing to say to you.’” Then he even adds, directly, “‘I prefer not to dine today. It would disagree with me; I am unused to diners.’”\(^78\) So at the close of this story, Bartleby’s words may very well be “inarticulate blocks.”\(^79\) But we also learn that he prefers a kind of resistance to \textit{sociality}—at least of the attorney and any of any dining companions.

Deleuze thinks that this story’s epistemological and ontological questions arise because of Bartleby’s formulaic words. But now it’s difficult to argue for his linguistic “formula.” Instead Bartleby seems to both be and \textit{reference type}, or a different kind of “inarticulate block.” “He” does not actually refer to a “person.” So he does not and cannot account for his preferences. His ontological status seems more like a “dead letter.” And while, of course, to some degree this is true of all written stories Melville makes it more explicit. The first time we encounter Bartleby, for example, he is described as “motionless” and “singularly sedate.” And the first time he is

\(^{76}\) Deleuze, \textit{Essays Critical and Clinical}, 74.

\(^{77}\) Melville, \textit{Piazza Tales}, 45.

\(^{78}\) Melville, \textit{Piazza Tales}, 43, 44.

\(^{79}\) Deleuze, \textit{Essays Critical and Clinical} 68.
described, we read: “Bartleby was one of those beings of whom nothing is ascertainable except from the original sources, and in his case, those are very small”: as in, the length of his story.”

It seems difficult to deny that Bartleby at least resembles the attorney’s text. Bartleby had a “great stillness” and “unalterableness of demeanor.” And “he was always there”—“inscrutable” and “unaccountable,” “firm and self-possessed.” “The passiveness of Bartleby sometimes irritated” the attorney, especially since it seemed to be “passive resistance.” But the attorney also senses—at least on some level—that this passive resistance is his own projection. At least, he repeatedly calls Bartleby a “cadaver” and then points to his “case.”

This is by no means Melville’s first move to explicitly inform readers that while a few characters represent living, changing people, most of them are only textual devices. As I explain at the end of my first chapter, for example, Moby Dick is clearly described in terms of his relationship to written text. First we encounter Melville’s “Etymology,” along with its discussion of the “invisible h” that separates “whales” from markings or “wales.” Next we are told explicitly, in the book’s first chapter, that “the image of the ungraspable phantom of life” is somehow the “key to it all.” And finally we learn that the white whale is, specifically, a “hooded phantom.”

The “ungraspable phantom” references some process or the “subtle” but “invisible” agencies. And while, of course, that “life” is not linguistically accessible, our answer “key” is just its image. The whale’s “hood” is the literal type, letter, or character, that makes that phantom visible. Finally, this reading is no allegory; it is placed into the text. The whale is a literal symbol: a type with no external references. He “is” text that represents an abstracted, consistent “character” —and, thus, he is, quite literally, both a representation of the concept “life” and a “dead letter” that has no material analogue beyond type, mark, or character.

80 Melville, Piazza Tales 19, 13.
81 Melville, Piazza Tales 26, 35, 27.
82 Melville, Piazza Tales, 23, 27, 30, 35, 13.
84 Melville, Moby-Dick, 5, 7.
Meanwhile, in contrast to Bartleby’s status as text, our narrator, the attorney, seems to represent a living person. And as New York’s Master in Chancery, he is willing to adjudicate. The attorney tells us, directly, that Bartleby is not to be our focus. Instead, it seems, we should watch the attorney reading him (however poorly): “Ere introducing the scrivener as he first appeared to me,” he tells us, “it is fit I make some mention of myself, my employees, my business, my chambers, and general surroundings; because some such description is indispensable to an adequate understanding of the chief character about to be presented.” He is the chief character. And we have to know his history because the story is about him. On this reading Bartleby seems to be his text, or his occasion for reading. And he is our occasion for considering interpretation.

This distinction between living narrators and dead characters has prepared us to understand The Confidence-Man’s famous thirteenth and fourteenth chapters—“the reminder going forward” and “glancing backwards.” What we’re told, looking forward, is that—as with White-Jacket, “need[ing] to be painted again and again, in order truly to present its actual appearance at any given period”—we might get a character right when we read him or her differently in different moments. But we cannot abstract out from a particular appearance to a stable identity. Nor can we move seamlessly across appearances that are united by one label. In Melville’s words, if we have already read a character in a particular way, our “previous penetration” may very well be accurate. But we cannot extend it to “a more or less hasty estimate.” Because “when [we] find the same person, as [we] presently will,” we do not want to be “betrayed into any surprise incompatible with [our] own good opinion.” Real life is inconsistent, Melville tells us, so the best characters are also inconsistent in ways that resist these “hasty estimates.” In fact, in chapter fourteen, which explicitly looks backward (to production) instead of forward (to interpretation), Melville argues against the idea that for writers the “consistency” of “any character” “should be preserved.” Instead, he points out that “fiction based on fact should never be contradictory to it.”

85 Melville, Piazza Tales 13.
And “nature herself” produces characters more inconsistent than any author could manage.\(^{87}\) So characters ought \textit{change}.\(^{88}\)

Here Melville describes characters like Bartleby and Moby Dick as being simultaneously static and inaccessible. He explains that writing to preserve consistency requires the production of “mere phantoms,” or unrealistic, consistent characters that “flit along a page, like shadows along a wall.” They are the bottom of the Platonic scale: copies reflected, through the “light” of understanding and for the sake of vision. These phantoms are, ultimately, reductive abstractions: “sections of character” that falsely “appear for wholes.” Their virtue is that they can be “comprehended at a glance.” But what they add with comprehensibility, they lose when we cannot begin to use them—pre-digested, oversimplified abstractions—to think about the actual, perpetually fluctuating world that Melville tries to capture. Melville concludes by declaring that he will move from “the comedy of thought” to “that of action,” or to generative development, as opposed to both attempts to create stable phantoms and his current, retrospective analysis.\(^{89}\)

So, again, Deleuze’s first error, is missing the fact that Bartleby’s speech is sometimes referential—specifically in ways that involve maintaining his status as what \textit{The Confidence-Man} will call a “stranger,” or a character who does not interact with other people. Deleuze’s second and related error is to overlook the story’s final segment, which makes this point more directly: “On errands of life, these letters speed to death.”\(^{90}\) They are meant to convey preference, choice, or meaning, but, of course, they can’t because they are just \textit{marks}. As this type of character—

\(^{87}\) Melville famously offers a sort of exposition on this tension between fluctuation and the illusion of “consistent characters” in the fourteenth chapter of \textit{The Confidence-Man}, when he explains, of one of his characters: “he may be thought inconsistent, and even so he is.” But, Melville asks his readers, “is the author to be blamed?” The suggestion that characters should have consistency, Melville explains, is in conflict with the imperative that “fiction based on fact should never be contradictory to it.” After all, Melville asks, “is it not a fact, that, in real life, a consistent character is a \textit{rara avis}?” “No writer,” he adds, “has produced such inconsistent characters as nature herself has.” Melville, \textit{The Confidence-Man}, 58.

\(^{88}\) Melville, \textit{The Confidence-Man}, 58.

\(^{89}\) Melville, \textit{The Confidence-Man}, 58, 60.

\(^{90}\) Melville, \textit{Piazza Tales}, 45.
or as letters—Bartleby elides reference. Text is dead. And as a textual creation, Bartleby is dead. He has gone to the Tombs, with their “surrounding walls, of amazing thickness” and “soundless” impenetrability.\(^9^1\)

If Bartleby is a just a textual “phantom,” or a literal allegory that exists only as this particular characteristic, we have to wonder whether his mute and antisocial status renders him “dead.” “Dead letters!” we read, “sound like dead men?” And Bartleby’s story, not surprisingly, can only be told after he meets his demise—or when his totality, or his complete text, is available for analysis. This, again, is the attorney’s starting point: “Bartleby was one of those beings of whom nothing is ascertainable except from the original sources.”\(^9^4\) He is his series of marks.

What makes Bartleby most interesting I think, despite Deleuze, is that our attorney-narrator will not allow his case to be judged or closed. He returns with an epilogue that amends his initial skeleton. And at that point he adds: “ere parting with the reader, let me say that if this little narrative has sufficiently interested him to awaken curiosity as to who Bartleby was, and what manner of life he led prior to the present narrator’s making his acquaintance, I can only reply that in such curiosity I fully share, but am wholly unable to gratify it.” Investment in him has been modeled for us; curiosity about his predicates, or true character, has also been modeled. And we readers are invited to continue with the attorney’s concluding, non-concluding move to invest his closed case with a new rumor, inevitably inviting new readings: that Bartleby had worked at the “Dead Letter Office at Washington,”\(^9^5\) The rumor, it seems, kept him “alive,” or at least it allowed “him” to continue to be read and reimagined.

This pattern is even more visible in Israel Potter’s telling dedication: “Israel Potter well merits the present tribute,” after years of receiving “a posthumous pension” that is annually paid every year “by the spring in ever-new mosses and sward.” Melville, of course, repeatedly links

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\(^9^1\) Melville, *Piazza Tales*, 44.


\(^9^5\) Melville, *Piazza Tales*, 45.
this verdant, regenerative growth of moss and grass with his own writing. But here he explains that his “present account” has been drawn “from a tattered copy, rescued by the merest chance from the rag-pickers.” And with the exception of a few expansions, additions, and “shiftings of scene,” Melville explains, the account “may, perhaps, be not unfitly regarded something in the light of a dilapidated old tombstone retouched.” This is quite literally true. As the editors of the Northwestern-Newberry Edition’s “Historical Note” indicate, *Israel Potter* “began as a rewrite of an obscure little narrative entitled *Life and Remarkable Adventures of Israel R. Potter.*” And after its opening chapter Melville “retells that tale, with close adherence to the language and events” of Potter’s *Life* for the first fifth of the manuscript, before adding “invented episodes” and “historical sources unrelated to the Life.” 96 So we might easily argue that the reading of the source text Melville’s novel was explicitly based on brought his character back to life, using new text and new readers to animate his lost “dead letters.” Melville’s connection between the revision of Potter’s story, his tombstone, and his decomposing body is far from incidental. In fact, he concludes Potter’s story by explicitly linking his “print” and his “self”: “He dictated a little book, the record of his fortunes. But long ago it faded out of print—himself out of being.” 97

Melville makes space for this kind of “character” in *The Confidence-Man,* which doesn’t only create questions about the impossibility of locating a stable identity—in a text where critics can’t decide whether there is one confidence man or nine or seven—but a model that allows for his “deaf mute” to be read. The text’s especially strange opening immediately problematizes the relationship between physical traits and narrative-based identities. First, a man in “cream-colors” appears suddenly and boards a boat with “neither trunk, valise, carpet-bag, nor parcel” or friends. This appearance is described as his “advent.” It happens on April Fools Day. The steamer is

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97 Herman Melville, *Israel Potter,* vii, 169.
named the *Fidèle*. And it is difficult to know what to trust. We might begin by looking to his lack of a “carpet bag,” which is far more relevant than it might seem. In an April 16, 1851 letter to Hawthorne, Melville writes of those who “cross the frontiers into Eternity with nothing but a carpet-bag—that is to say, the Ego.” So we might, at this point, read that a man in cream-colors appeared suddenly, or had an advent. He had no history, no Ego, and no friends. Instead he seems to be nothing but a “singularity” that was “heightened by his muteness.” As I suggested with Bartleby, “he” seems to be “dead letters” that we might observe—and add predicates to.

Bartleby’s words famously lead readers to search for his undiscoverable preferences. Meanwhile this equally pallid “man in cream-colors” “involuntarily betrayed” that he was both “deaf” and “dumb.” So he attempts to communicate with text. Somehow, without luggage, he produces a slate and writes: “Charity thinketh no evil.” Then he offers a new kind of “formula,” repeatedly erasing the words after “Charity,” only to follow the term with new predicates, while “the word charity, as originally traced, remained throughout uneffaced”:

Charity suffereth long, and is kind.  
endureth all things.  
believeth all things.  
ever faileth.

Again, Bartleby, I have explained, prefers disengagement. Meanwhile, this “mute” “stranger” only communicates with written words. And that text reveals at least an apparent belief in both the primacy of “charity” and the possibility of subjects that are able to hold shifting predicates. Like the lawyer, or interpreter, in “Bartleby” who decides to “endeavor charitably to construe to his imagination what proves impossible to be solved by his judgment,” we encounter a subject that functions not in terms of representation but through imagination and projection forward.

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The Confidence-Man’s final scenes are less a conclusion than what seems to be a kind of promise for a future grounded in the possibility of new combinations—and new interpretations. The “old man” who I described as an extra-legal “Foreman” who “prosecuted” with “lawyer-like efficiency” finds that—with his metal “Detector”—“there's so many marks of all sorts to go by,” reading becomes “kind of uncertain.” The Cosmopolitan asks “why, in this case, care what it says?” Then he suggests that it might be about “Trust and Insurance.” He recommends throwing the detector away. Then he discusses the old man’s desire for “security.” The old man realizes that he needs something that will keep him secure. And the Cosmopolitan quite famously offers him a chamber pot as a “well soldered,” or secure “life-preserver.” Here the desires for security, consistency, and something sealed and impenetrable all converge in ways that set them directly against the uncertainty of reading and interpretation. In the immediate aftermath of his dual desire for both security and some kind of “life-preserver” he is “led away.” And as the light goes out, far from saying “the end,” Melville’s response is: “something further may follow of this Masquerade”: a telling reference to an “afterlife,” linked to both the chamber pot and the book’s own subtitle.103

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From the deposition in “Benito Cereno” to the whale’s brain in Moby-Dick, Melville’s illegible “cases” famously invite and then refute hermeneutic models. But those “closed cases” also tend to invite generative modes of reading; or, to use Melville’s image, they prompt weaving on textual skeletons. This is clearest in Moby-Dick when Ishmael imagines coral insects as “weaver-gods”:

Amid the green, life-restless loom of that Arsacidean wood, the great, white, worshipped skeleton lay lounging—a gigantic idler! Yet, as the ever-woven verdant warp and woof intermixed and hummed around him, the mighty idler seemed the cunning weaver; himself all woven over with the vines; every month assuming greener, fresher verdure; but himself a skeleton. Life folded Death; Death trellised Life.

These “weaver-gods” weave upon a whale skeleton—while vines weave upon them. And in the midst of “Life” layering upon every available trellis, Melville imagines proliferating language.

“Speak, weaver!” Ishmael demands, until “figures float forth from the loom.” And here Melville ultimately seems to tell us about reading and writing. To look at the loom, he explains, is to be “deafened.” But “when we escape it” we can “hear the thousand voices that speak through it”—as if meaning is in the uses of language, as opposed to the letters themselves.106

Melville, I am suggesting, resists language that is used as cases or contracts or as anything that is stagnant or final. At that point, dead letters are paired with dead men. But he is an author. He is not against language. Instead he supports an organic model that is about production. This is clearest in his chapter “The Crotch,” which begins “out of the trunk, the branches grow; out of them, the twigs. So, in productive subjects grow the chapters.” But this way of thinking about language arguably continues in Pierre when new things are “produced” by “corroding the old.” That corrosion is still green, or the “signet of all-fertile Nature.” And here Melville explains, in both nature and in “political institutions,” “Death itself becomes transmuted into Life,” such that the American political system seems to possess the “virtue” of “natural law”: “that out of Death she brings Life.”107 This model also seems to hold true for the continuous “looming,” “varnishing,” or interpreting that shapes “still,” “motionless,” “unalterable,” “inscrutable,” “unaccountable,” and “singularly sedate” characters or “cadavers” or “cases” like Bartleby108

106 This relationship between dead skeletons and generative production continues in the very next scene. Ishmael explains that he has had a whale’s skeleton tattooed onto his right arm, since there was “no other secure way of preserving valuable statistics.” But, he continues, “I was crowded for space, and wished the other parts of my body to remain a blank page for a poem.” And when Ishmael relates Queequeg’s story, we encounter his counterintuitive plan to “present the whole story such as it may prove in the mere skeleton I give.” The excess, it seems, is to come from the reader: a builder, not an architect. To borrow from “Cetology”: “small erections may be finished by their first architects; grand ones, true ones, ever leave the copestone to posterity.” So “whole book is but a draught – nay, but the draught of a draught.” Imagine: Moby-Dick as outline. Melville, Moby-Dick, 345-346, 58, 125.


I suggested in my introduction that like Hawthorne and Child before him, Melville seems to be reminding us of the importance of a body of law that is also a so-called “living document.” After all *Israel Potter’s* “long ago it faded out of print—himself out of being” isn’t only about the direct relationship between “print” and “being” that Melville draws.\(^\text{109}\) The original subtitle of the rewritten book was “A Fourth of July Story,” which makes it difficult to not also consider Melville’s deep skepticism about the people who are not part of the Declaration—or protected by the Constitution—or allowed to offer legal testimony. Instead in antebellum America they can tell a different kind of story.\(^\text{110}\)

Caleb Smith’s *The Oracle and the Curse* tellingly concludes with Melville—after beginning with an account of the ways that “in the Jacksonian and antebellum periods, *literary authors* established their autonomy by defining themselves against the social and ideological world of *lawyers*.” By the antebellum period, he explains—following Dimock—“law and literature had become ‘different operative theaters,’ featuring ‘different styles of knowledge.” “The law’s conception of justice,” Smith continues, “could now be brought before the bar of the literary, with its alternative standards of judgment.” Melville, in turn, wrote his “gothic fictions of martyrdom” attending “to the ambiguities of motive that seemed to fall into the blind spots of a criminal justice system concerned with” exactly the kinds of “*verifiable facts and a secure social order*” that I have shown him working to reject—even in a world where Melville also has to contend with “the intrusion of law’s logics and rituals into intimate relations,” which I have also described.\(^\text{111}\)

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111 Caleb Smith, *The Oracle and the Curse* (Cambridge: Harvard University Press, 2013), 29-31. Smith even goes on to explain that his “study of the *poetics of justice*” begins with *Pierre* and his “appeal to Isabel,” which serves as an “invitation to ratify an act, backward, with her consent.” This is Smith’s “oracle”: “a figure calling for a *retrospective legitimation*, distinct from the authority that is claimed by
Here Smith gives us far more to say about Melville’s “dead letters,” which I have framed as acts of writing or “looming” or producing coats of “varnish”—all from future extralegal juries who will continue to read and to write, helping those letters grow and continue to unfold. With “Bartleby wasting away in the Tombs, Babo dismembered in the public square, Billy dangling from a spear—again and again,” Smith reminds us, “Melville dramatizes scenes of martyrdom, where the state, enacting a more or less spectacular legal violence against an offender also composes on his body the record of its own excesses and injustices. Well acquainted with the law, Melville took up the burning questions that defined antebellum struggles over justice.” But “in almost all of this fictions, though,” Smith adds, “Melville’s figure of the martyr is a cryptic or a silent one. Asked to account for himself the ghostly Bartleby gives his characteristically evasive reply, ‘I would prefer not to.’ Silently submitting to interrogation, to judgment, and to the punishment of death, the rebel slave Babo makes no confession. ‘Seeing all was over,’ Melville writes, ‘he uttered no sound, and could not be forced to. His aspect seemed to say, since I cannot do deeds, I will not speak words.’ Ultimately Smith concludes that “The lingering presence of these cryptic or silent bodies is unsettling to the men who persecute them, ambiguously prophetic to the public that looks on. Melville’s martyrs do not curse. Instead they seem to haunt.” And here “haunting can be understood as Melville’s trope for the martyr’s long afterlife in circulation.”

I would add—and have added—that these haunting figures are the ones that Melville frames exactly not as persons but as text. I have described Bartleby as a kind of text for the attorney who is his reader and “chief character.” And unlike the attorney—in his dual role as failed interpreter and former judge—in “Benito Cereno” Melville offers a narrator, Amasa Delano, who has a stunning moment of recognition of Babo’s agency when “the scales dropped from his eyes.”

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representative legislatures”—like much of what I have attempted to describe with my account of deформalized lawyers and judges. Smith, The Oracle and the Curse, 15-16, 211.

112 Smith, The Oracle and the Curse, 211-212.

113 “Delano, now with the scales dropped from his eyes, saw the negroes, not in misrule… but with mask torn away, flourishing hatchets and knives in ferocious piratical revolt.” Melville, Piazza Tales, 99.
This certainly doesn’t mitigate his multitude of racist assumptions—or clear support of slavery. But it seems notable that even as Babo declines to “speak words” he is recognized, by Delano, as a character that defies his alleged “type.” We watch Delano interpret—over and over—until he finds something new. And readings of him become reframed exactly in Melville’s now familiar contrast of natural law set against political order. “‘The past is passed; why moralize upon it? Forget it. See, yon bright sun has forgotten it all, and the blue sea, and the blue sky; these have turned over new leaves.’” The world begins to write anew—and on new leaves of paper, we are told. But Don Benito points out, “dejectedly,” that these things fluctuate “‘because they have no memory’”—“‘because they are not human.’” And to explain why humans cannot turn over “new leaves” he offers a concise but seemingly doubled answer: “The negro.” This resonates in terms of the problems foregrounded by the two major components of Melville’s text: the story and its deposition, which trouble both racial slavery and the ink that underwrote it. And “Benito Cereno” tellingly begins just after the epilogue of “Bartleby”—a story where we might even argue that a character is brought to “life” by the attorney’s reading—and our own.  

Smith continues by explaining that “Melville’s gift” “was to see the relation between legal violence and literature” “in terms of time. He recognized that there are multiple temporalities of circulation, and that a martyrdom becomes a ‘portent’ or a prophecy only in retrospect.” And here “haunting can be understood as Melville’s trope for the martyr’s long afterlife in circulation, the figure’s becoming-available to receptions not organized by the political coordinates of the present. For if Melville unmoors the power of martyrdom” from “subjectivity and sets it afloat in the circuits of transmission and uptake, he also imagines that the time of circulation is unpredictable, unfathomable.”  

This is the second kind of “material circulation” that matters for Melville. And in these moments, at least, Melville’s literary circulations serve the same purpose as his material circulations: they resist the Law.

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114 Melville, Piazza Tales, 116.  
115 Smith, The Oracle and the Curse, 212.
A Final Note on Literature and Politics

This dissertation was submitted on the day that Donald Trump was elected to become the President of the United States, and in that context one final haunting question has to be asked. What is the efficacy of literature in discussions about political life? I have referenced discussions by Priscilla Wald, Wai Chee Dimock, and Caleb Smith about the “literary” world inhabiting a kind of separate sphere that enables literature to differ from and to comment on politics. And yet, in this particular moment—on this particular day—it seems especially difficult to claim that literature can do anything to shape political life. One goal of this project was to think differently about the invisible “whales” floating into Ishmael’s soul—as dual atoms and letters—or as “subtle agencies” that affect us at levels that are beneath the level of conscious understanding.

We need a kind of “posthumanist politics,” which is more than a “posthuman” one. That is to say: we need a way of thinking and talking about both experience and politics that isn’t only more aware of the remarkably tenuous lines that help categorize the “people” who count and the ones who don’t. Instead we also need to think rigorously about how to discuss decisions and behavior without turning to liberal agents and rational actors. How—as social psychologists have worked to describe during the course of this decade—do people arrive at decisions, not by “making” them in any sort of intentional way but by finding them—sometimes even stumbling upon them—in a world where our thoughts are perpetually affected by our surroundings and by other creatures? These are the “whales” that “wrought on Ahab’s texture,” or the “material circulations” and perpetual recombinations—or the change and growth of lived experience—that shape us in ways that models grounded in “identity” do not capture. We need ways of discussing politics that are more rooted in ontology—or, at least, in the best descriptions we can find about how the world is—than in our political fantasies about it. Put bluntly: it is time for critics to leave Habermas behind.
On this day—when Americans have elected Donald Trump—it feels especially problematic to push back against readings of Melville’s most famous scene: Ahab on the quarterdeck, allegedly serving as a kind of dictator ruling a ship that is destined to sink. Perhaps, it seems, we need to hold on to this political reading. Perhaps we are not ready to move on to the environmental one—even if it offers a new kind of “politics.” Perhaps “ontology” is a luxury better left to philosophers in “ivory towers,” who often do not write about political life. But we also need readings that move past the content of political rhetoric and towards more difficult questions about how that rhetoric both feels and functions—or about how language is also a kind of material that constructs its own of fields of force which, quite literally, reform us.

The claim that ultimately shapes Melville’s Ontology is that Melville sees this moment of transformative scientific developments that challenged the idea of stable, coherent, rational actors and felt—at least in certain moments—the need to think differently about not the posthuman question (i.e. who counts as a person) but the posthumanist one (i.e. what makes anything count as a “person” at all)? Melville pressured the entire category at a moment when authors were just beginning to challenge inherited accounts of both the human and the person in ways that were so radical that most critics’ discussions of epistemology and of politics still live in its shadow. And yet: if this responds to the question of “The Quarter-Deck,” it still leaves a larger question. At the end of the day, Melville offers—I have argued—a kind of utopian political fantasy about humans as material entities who are not convinced so much as moved—and even reconfigured. But if the only acceptable goal of literary criticism is a political one, then we also have to acknowledge that Melville’s theory—and his utopian thinking—and his political fantasy—is not enough to save us. The question that haunts this project is one that haunts contemporary literary criticism. And that question is: what political role does the imaginative work of literature play? Moving and reconfiguring readers does, in fact, offer something—however ineffable, or difficult to measure. But to make the kind of world he wanted should Melville have done something about Lemuel Shaw instead of writing fiction?
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