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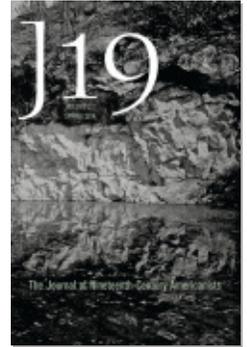
## Knowing as Neighboring: Approaching Thoreau's Kalendar

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## Knowing as Neighboring: Approaching Thoreau's Kalendar

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In the final years of his life, Thoreau consolidated the detailed observations of seasonal change recorded in the later years of his Journal in a variety of lists and charts sometimes referred to as his “Kalendar.” Though these unpublished materials have received relatively little scholarly attention to date, they have important implications not only for the ongoing reassessment of Thoreau’s place in the history of ideas in America but also for our changing understanding of the categories of the literary and the scientific, the human and the natural. In his introduction to Thoreau’s late text *Wild Fruits*, Bradley Dean writes that in 1851 Thoreau

compiled the first of what would become many hundreds of phenological lists and charts on every conceivable seasonal phenomenon, such as the migration cycles of birds or the leafing, flowering, fruiting, and seeding of plants . . . Although his lists and charts have never been studied carefully, they are almost certainly the foundation for the large project that eventually included *Wild Fruits*. After reading John Evelyn’s *Kalendarium Hortense* or Gardener’s *Almanack* (1664) in the Spring of 1852, Thoreau occasionally referred to this large project as his “Kalendar.” Apparently he intended to write a comprehensive history of the natural phenomena that took place in his hometown each year.<sup>1</sup>

Another likely model for the Kalendar was William Howett’s 1831 *Book of the Seasons*, a book Thoreau reviewed, which combines “observations

and meditations organized by month and accompanied by tables of migrating birds, blooming flowers, budding trees, and emerging insects.”<sup>2</sup> While the *Kalendar* must be understood within its own historical and intellectual moment as exemplifying a particular mode of nineteenth-century scientific and philosophical thought and drawing from nineteenth-century practices such as daybook-keeping and other forms of amateur natural history, it is also possible to see Thoreau’s massive, incomplete final project in the light of several contemporary lines of thought, particularly those emerging from recent work in science studies. In an effort to come to terms with Thoreau’s complex textual practices in his final years and to make sense of what Emerson obliquely referred to as his “broken task,” this essay will attempt a rough sketch of the understanding of knowledge reflected the *Kalendar*, a sketch I hope will be expanded, complicated, and contested by further scholarship on these fascinating and difficult manuscripts as they become more widely available.<sup>3</sup> As I will elaborate below, in the *Kalendar* project Thoreau enacted an alternative to the available idealist and materialist models of knowledge, developing in their place an understanding of knowing as “neighboring”: that is, through his daily practices of walking and writing, Thoreau arrived at a particular way of being-with and thus of knowing the nonhuman—a way that should be of interest to contemporary efforts to rethink the nature/culture binary.

A note about method: as the description that follows will make clear, the nature of the *Kalendar* manuscripts make a strictly literary critical approach untenable. The *Kalendar* is not in any recognizable sense a “literary” text. As Rochelle Johnson articulates in *Passions for Nature*, the *Kalendar* reflects an attempt to record what Thoreau understood to be a nonhuman language of events and phenomena, a language that he characterized as “without metaphor.”<sup>4</sup> Further, the status of the *Kalendar* is ambiguous: it is, on the one hand, a kind of index to or compendium of the *Journal*, a consolidation and temporal reorganization of certain of its contents; on the other hand, it may be seen as a blueprint for a major, never-realized project. One of the difficulties posed by the *Kalendar* is that it doesn’t exist as a discrete, completed manuscript but rather represents a node in the complex network of texts—the later drafts of *Walden*, the natural history essays, the *Journal*, the field notes, etc.—that is also inscribed within a network of interrelated activities: walking, reading, writing, chart-making, transcribing. Thus, though I will rely on standard literary techniques for reading entries and related

Journal passages, my readings are supplemented by theoretical frameworks borrowed from scholars within the field of science studies who understand their principle objects of study to be not texts but practices. Specifically, the essay will suggest that frameworks developed by Bruno Latour, Donna Haraway, and Karen Barad may be useful for our understanding of the concept of “neighboring.”

### Knowing as Neighboring

The Kalendar project was a massive endeavor to chart the seasonal life of Concord in a way that reflects both Thoreau’s interest in the material particularity of natural occurrences and his desire to discern laws or patterns within such phenomena. Among the hundreds of lists and charts that Thoreau compiled during these years is a set of charts in which he collected observations of “general phenomena” by month, with the phenomena listed in a column on the left side of the page, and the years along the top. In the spaces of the grid created by these two axes, Thoreau copied observations from the later years of the Journal (fig. 1).

These charts are generally concerned with weather patterns: rain-fall, temperature, ice-out and other markers of seasonality. The chart for the month of April contains an additional column on the left edge of the page with numbers that I hypothesize represent roughly average dates for each phenomenon (see fig.1). Though we can’t know exactly what Thoreau’s intent was for the Kalendar project, this evidence supports Dean’s view that the Kalendar would be a massive work tracking Concord’s seasonal phenomena through an “archetypal” year, organized, like *Wild Fruits* and *The Book of the Seasons*, as a sort of encyclopedia.

The creation of the monthly charts was a multistage process. During these years, Thoreau’s routine was to walk for several hours each morning and spend the afternoon in his study working on a network of writing projects the central node of which was the Journal. Thoreau took field notes on his walks, usually on small scraps of paper. These he used as the basis for his Journal entries, which were often written in the present tense, though sometimes composed a day or even several days later. In 1860 he began mining the Journal for seasonal observations across the years, beginning with the Journal of 1850–51, the year his observations of the natural world famously intensified. He then compiled the seasonal data into monthly lists organized by year (see fig. 2).

Figure 1. General Phenomena for April (2), "Nature notes, charts and tables: autograph manuscript," MA 610. The Pierpont Morgan Library, New York.

From these lists he selected key representative categories to include in the charts of general phenomena. One of the most interesting features of these charts is the juxtaposition of what would normally be considered "objective" and "subjective" categories of observation.

As the example here illustrates (see fig. 3), the charts of general phenomena include Thoreau's own activities and seasonally determined behaviors ("Begin to wear one coat commonly," "Sit below with-

General Phenomena for May

May 22-59 see a great many  
leaves killed <sup>very</sup> ~~some~~ <sup>some</sup> ~~some~~ <sup>some</sup> ~~some~~  
at the edge of the woods about the 15<sup>th</sup>.  
(V date for kinds)

25 The rain quite heavy for  
the season on acc. - yet the rain

26 The air full of tobacco smoke down  
and 2 weeks from the  
low in water  
- Thunder about 10:00 AM &  
near rap house on the  
ground over at sea

27 First notice light dew on  
the surface of water  
about 10:00 AM

28 Wind - heavy rain, & lightning  
low

60

May 1<sup>st</sup> The very middle of early  
botanical planting

2 Rain 3 5/16 below S.E.

2 Clouds (the sun) with 

The precipitation wind NE for mid of  
April to May 14<sup>th</sup> - about  
about in variety of early - but not  
any rain  
Cool nights of water

3 + with wind makes a cool day

4<sup>th</sup> Rain 3 1/4 in. below S.E.  
warm - 70<sup>th</sup> at 6 PM  
Sun sets red.

5 Clouds in grass in morning  
76 + warm - cloudy  
single thick coat too much.  
NO artificial coat for the 14<sup>th</sup> to May 15<sup>th</sup>  
at least - & no fire in  
shades - no long -  
muffs, brown red -

6 Rain 3 1/4 in. below S.E.

but only 3/18 low than the 29 with  
no rain - great drought  
(20<sup>th</sup> - 21<sup>st</sup> with for Cambridge  
mass)

6<sup>th</sup> 74 + wind SE & heavy  
shade grateful  
with these morning for a  
with light  
my chamber in morning rain clearing

7 very heavy day & cloudy  
Rain 5 3/4 below S.E.

9 A still cloudy thoughtful day  
cattle still young of country  
the 14<sup>th</sup>

10 Rain 6 1/8 - 1/2 below S.E.  
The wind died away with the  
& the wind for sun about  
small - no rain  
since the 16<sup>th</sup>

11 very warm - 77 + etc  
Notice shade of houses <sup>then</sup>  
on acc. quantity below here

12 very hot 81 + at 2  
Rain with little & cool  
1<sup>st</sup> bath  
very heavy dew swift - place  
very heavy good black with it -

13 beautiful for days on year  
warm 84 at 8 - 82 +  
Heat with sun under 88 to night  
Rain 6 15/16 below S.E.  
Remotely warm & clear in middle  
day  
Summer - all much  
The 3<sup>rd</sup> night evening in - by chamber  
First lightning seen in N

14 Heat continues  
Remotely heavy  
low / that NE  
The sun light yellow  
per much cooler (60+) & cloudy

MA 610

Figure 2. General Phenomena for May (list), "Nature notes, charts and tables: autograph manuscript," MA 610. The Pierpont Morgan Library, New York.

out fire commonly," "1<sup>st</sup> am that I sit with open window," and "weather for half-thick coat") alongside phenomena such as wind, rainfall, and the opening of Walden Pond.

During these years Thoreau frequently comments in the Journal on the nature of perception and specifically on what he sees as the flawed epistemology of science:

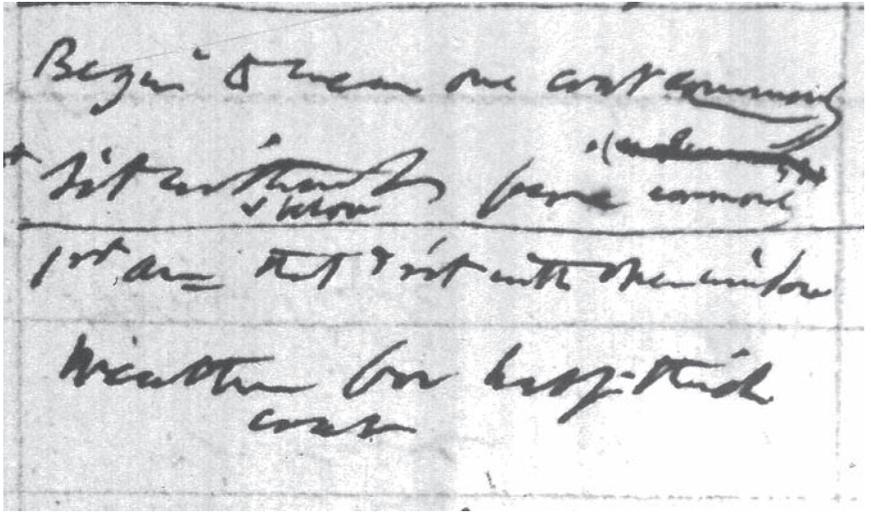


Figure 3. Categories from the April Chart of General Phenomena, "Nature notes, charts and tables: autograph manuscript," MA 610. The Pierpont Morgan Library, New York. "Begin to wear one coat commonly," "Sit below without fire commonly," "1st am that I sit with open window" and "weather for half-thick coat."

I think that the man of science makes this mistake, and the mass of mankind along with him: that you should coolly give your chief attention to the phenomenon which excites you as something independent on [*sic*] you, and not as it is related to you. With regard to such objects, I find that it is not they themselves (with which the men of science deal) that concern me; the point of interest is somewhere between me and them (i. e. the objects).<sup>5</sup>

The charts of general phenomena, in particular their integration of the categories of the "human" and the "natural," provide a record of Thoreau's own essentially relational and performative understanding of knowledge, an understanding that reflects the way that, as Laura Dassow Walls has demonstrated, Thoreau was both profoundly engaged with and deeply critical of professional science as it emerged in the second half of the nineteenth century. Placing Thoreau within an "alternative tradition of romantic science" that she associates with the German polymath Alexander von Humboldt, Walls argues that "recovering this alternative tradition enables a new understanding of the problematical studies which fill the later years of Thoreau's *Journal*, which are also the years of his greatest literary productivity," and she asserts, against the traditional view of the shift in Thoreau's career, that "Thoreau was

transformed not from an Emersonian transcendental poet to a fragmented empirical scientist, but from a transcendental holist to something new which combined transcendentalism with empiricism and enabled innovative, experimental and postsymbolic modes of thinking and writing.”<sup>6</sup>

When Thoreau began compiling the lists and charts that compose the *Kalendar*, he had been interested in seasonal phenomena for some time. An 1856 *Journal* entry details both his process of (in this case botanical) phenological observation and contrasts these practices with those of “systematic” botany.

About half a dozen years ago I found myself again attending to plants with more method, looking out the name of each one and remembering it. I began to bring them home in my hat, a straw one with a scaffold lining to it, which I called my botany box . . . I remember gazing with interest at the swamps about those days and wondering if I could ever attain to such familiarity with plants that I should know the species of every twig and leaf in them, that I should be acquainted with every plant (excepting grasses and cryptogamous ones), summer and winter, that I saw. Though I knew most of the flowers and there were not in any particular swamp more than half a dozen shrubs that I did not know, yet these made it seem like a maze to me of a thousand strange species, and I even thought of commencing at one end and looking it faithfully and laboriously through till I knew it all. I little thought that in a year or two I should have attained to that knowledge without all that labor. Still, I never studied botany and do not to day systematically, the most natural system is still so artificial. I wanted to know my neighbors, if possible,—to get a little nearer to them. I soon found myself observing when plants first blossomed and leafed, and I followed it up early and late, far and near, several years in succession, running to different sides of the town and into the neighboring towns, often between twenty and thirty miles a day. I often visited a particular plant four or five miles distant, half a dozen times within a fortnight, that I might know exactly when it opened, beside attending to a great many others in different directions and some of them equally distant, at the same time.<sup>7</sup>

Thoreau's description of his processes of observation and collection during this period (from roughly 1850 on) emphasizes the extraordinary intensity and the habitual quality of his activity and contrasts it explicitly with the "systematic" approach of formal botany. His relationship to the nonhuman is characterized not by cool detachment but by energetic affection: a "gazing with interest" that contrasts strikingly with what Donna Haraway calls the "conquering gaze from nowhere" that characterizes popular depictions of science.<sup>8</sup> Perhaps most notable here is his characterization of the plants he "visits" as "neighbors" and the process of observing them as the kind of knowing that is reflected by the expression "getting to know."<sup>9</sup> In his compelling essay in the recent volume *Thoreauvian Modernities*, "Brute Neighbors: The Modernity of a Metaphor," Thomas Pughe traces the complexity of Thoreau's use of the word "neighbor" as a transformational trope that "seems to combine scientific interest, environmental care and aesthetic appreciation. It marks an attitude or a practice with respect to the natural world that refuses appropriation without accepting severance. In that respect, it is no longer 'merely' a trope."<sup>10</sup> Indeed, as I will argue, it is precisely the complexities involved in "neighboring" the nonhuman that Thoreau explores throughout his writing life and that come to the fore in both the structure and content of his *Kalendar* manuscripts.

Thoreau's critiques of science in the *Journal* have long been central to discussions of his status as a "literary" writer, and no entry is more widely quoted than his famous response to a questionnaire from the Association for the Advancement of Science in 1853:

I felt that it would be to make myself the laughing stock of the scientific community to describe or attempt to describe to them that branch of science which specially interests me, inasmuch as they do not believe in a science which deals with the higher law. So I was obliged to speak to their condition and describe to them that poor part of me which alone they can understand. The fact is I am a mystic, a transcendentalist, and a natural philosopher to boot . . . How absurd that, though I probably stand as near to nature as any of them, and am by constitution as good an observer as most, yet a true account of my relation to nature should excite their ridicule only.<sup>11</sup>

As many critics have observed, part of the interest of the entry is its relationship to Thoreau's intensifying "scientific" activity during this

period. Traditionally, the scholarly debate has sought to pit Thoreau the Transcendentalist against Thoreau the scientist.<sup>12</sup> Of more interest to me than the words “transcendentalist” and “higher law” in this passage, however, are the words “near” and “relation,” which point to his critique, not (or at least not only) of empiricism but of contemporary scientific *practices*, a critique that is echoed in his 1858 Journal remark that “a dead specimen of an animal, if it is only well preserved in alcohol, is just as good for science as a living one preserved in its native element.”<sup>13</sup> This critique asserts the value of a living relation (both between the observer and the observed and between the observed and its habitat or “native element”) against an ethos of objectivity and distance, embodied, in Thoreau’s view, by “the scientific community.” In his biography of Thoreau, *A Natural Life*, David M. Robinson argues that we can “understand Thoreau’s resistance to the emerging science of his day as an imperfectly articulated recognition that a scientific ‘fact’ was not necessarily an unmediated perception of a pure phenomenon but an organized and produced result of a particular form of human social practice,” a recognition that is among the central claims of science studies.<sup>14</sup>

#### **The Kalendar and Science Studies: Latour, Haraway, Barad**

As early as 1837, in a passage striking for its resonance with twentieth-century theories of language,<sup>15</sup> Thoreau notes with some despair the impossibility of unmediated access to the nonhuman world. “We may believe it, but never do we live a quiet, free life such as Adam’s, but are enveloped in an invisible network of speculations. Our progress is only from one such speculation to another and only at rare intervals do we perceive that it is no progress. Could we for a moment drop this by-play and simply wonder without reference or inference!” If this understanding of the way that, in William James’s phrase, “the trail of the human serpent is thus over everything” represents one end of the spectrum of Thoreau’s complex and shifting thinking about his relation to the nonhuman, the other end is represented in his periodic descriptions of deep connection to the natural world.<sup>16</sup> In an 1857 Journal entry, for example, he writes, “These regular phenomena of the seasons get at last to be—they were at first, of course, simply and plainly phenomena of my life. The seasons and all their changes are in me . . . After a while I learn what my moods and seasons are.”<sup>17</sup>

Navigating this spectrum of experience (from alienation to correspondence with the nonhuman), was, for Thoreau, less a matter of arriving at a satisfactory theoretical solution than of refining those

practices that allowed him to experience, more frequently and more intensely, an intimacy with the nonhuman. As scholars of the *Journal* have observed, Thoreau is often discomfited by a sense of separation from the natural world. In April 1852 he writes,

Having occasion to day to put up a long ladder against the house, I found, from the trembling of my nerves with the exertion, that I had not exercised that part of my system this winter. How much I may have lost! It would do me good to go forth and work hard and sweat. Though the frost is nearly out of the ground the winter has not broken up in me. It is a backward season with me. Perhaps we grow older and older till we no longer sympathize with the revolution of the seasons, and our winters never break up.<sup>18</sup>

I would emphasize here that if the problem as Thoreau identifies it seems an abstract or philosophical one, a lack of connection to the material world of nature, the solution he proposes is an active, physical one. The breaking up of the backward season is not a matter of changing his philosophical orientation toward the natural but rather of engaging in a different kind of activity; or rather, it is a matter of discovering, within that activity, a new philosophical orientation.

A central strain of the scholarly conversation about Thoreau has been the attempt to render coherent the diverse expressions (I'm avoiding here the word "contradiction," which itself suggests the assumption of underlying coherence) within Thoreau's writing by placing Thoreau in the camp of either literary writer or proto-ecologist, or theorizing a philosophical split in his career (this split was generally depicted as tragic before the 1990s, and as triumphant afterward). Retracing Thoreau's methods in assembling the *Kalendar*, however, points to the ways in which critical habits have loaded the hermeneutic dice: wishing for a Thoreau we can theorize, we create a Thoreau driven by theory. What the *Kalendar* forces upon us, in its sheer resistance to literary or scientific interpretation, is a confrontation with the persistent and finally irreducible particularity of the interrelated practices of living in which Thoreau's practice of writing was enmeshed. Thoreau's philosophy was, finally, an emergent one, characterized by all of the complexity of other emergent phenomena, and grounded in and by his daily practices.

It is largely an accident of history that I wish to trace this practice-based epistemology forward rather than back. As the end of this essay suggests, I'm persuaded by Pierre Hadot's readings of ancient Greek

philosophy as essentially related to and emergent from spiritual exercises that one might just as productively connect Thoreau's writing practices, as indeed Hadot does, to the Stoics as to contemporary science studies. My background in the twentieth-century American philosophy of pragmatism and its implications for understanding literary practices, however, has trained me to hear echoes of the *Kalendar* in the practice-oriented work of Latour, Haraway, and Barad. While the backward glance has the distinct advantage of biographical grounding—Thoreau was, of course, exceptionally well read in the classics—the theorists I evoke to help frame Thoreau's *Kalendar* share with him, in addition to an interest in both practice and relationality, a desire to, as Latour suggests, “add reality to science” rather than withdraw reality from it.<sup>19</sup> That is, in seeking to describe and theorize the work of science in a way that includes the contexts in which scientists operate, these writers seek not to undermine but rather to enrich our understanding of how we, both scientists and nonscientists, engage with a real world. I see this fundamental task of science studies as consonant with Thoreau's project in constructing the *Kalendar*.<sup>20</sup> Combining this perspective with Wall's description of Thoreau as part of an “alternative tradition” of “empirical holism,” may allow us to connect nineteenth- and twenty-first-century alternatives to the view of science as a body of knowledge separate from human practices.

In a lucid overview of Latour's work, Graham Harman writes that “Latour's universe is populated with countless human and non-human *actors*. Political power acts upon us and textual rhetoric acts upon us, but so do cement walls, icebergs, poisonous snakes. Prior to any distinction between animate and inanimate, between ‘naturally real’ and ‘socially produced,’ the world is a duel of genuine discrete entities.”<sup>21</sup> Latour's actor-network theory is thus a reflection of the same kind of approach to understanding human/nonhuman relations that is enacted in the charts of general phenomena: “Sit below without fire commonly” and “1<sup>st</sup> am that I sit with open window” depict the way that Thoreau sees himself as simultaneously observing subject and observed object, as acted upon by as well as acting on the nonhuman. Moreover, his inclusion of these categories immediately alongside such seemingly “objective” phenomena as the height of the river suggests a horizontal view of *all* seasonal phenomena, human and otherwise.

As both Laura Dassow Walls and William Rossi have noted, Thoreau's construction of natural historical knowledge after 1850 as articulated in the *Journal* bears a striking resemblance to Latour's concept of

“circulating reference,” the chain of transformations that allows scientists to, in his description, “pack the world into words.”<sup>22</sup> Latour develops this concept in his anthropological study of a soil science expedition in Boa Vista, Brazil. Latour notes the function served by the specimens the botanist collects in the field and then stores in her collection. The existence of this collection means that “we will be able to go from her written report to the names of the plants, from those names to the dried and classified specimens. And if there is ever a dispute, we will, with the aid of her notebook, be able to go back from these specimens to the marked-out site from which she started.”<sup>23</sup> The botanist’s study does not give us a picture of the forest, rather it adds to a chain of circulating reference that constitutes our connection to and knowledge of it. Each step in the chain, it is important to note, is marked by transformation, and such transformations represent both loss and gain. The lab specimen is no longer the forest, no longer even the living plant, but it *is* portable, translatable, able to be placed beside other specimens for comparison. As Latour notes, “In losing the forest, we win knowledge of it.”<sup>24</sup> Describing this process, Latour writes:

It seems that reference is not simply the act of pointing or a way of keeping, on the outside, some material guarantee for the truth of a statement; rather it is our way of keeping something *constant* through a series of transformations. Knowledge does not reflect a real external world that it resembles via mimesis, but rather a real interior world, the coherence and continuity of which it helps to ensure.<sup>25</sup>

Latour’s model of how scientific knowledge is constituted is particularly applicable to Thoreau’s *Kalendar*. Like the botanist, Thoreau moves from observation in the field (recorded in his field notes) to a more polished account written later in his study. In Thoreau’s case, however, the chain continues, from the *Journal* to the lists, and then from the lists to the charts. As with Latour’s circulating reference, each step along this chain involves a transformation: *Journal* entries often expand upon the field notes, which are in turn condensed and grouped in different ways in the lists and charts. Yet the seasonal phenomenon itself remains constant through this chain of transformation, gaining coherence and clarity as Thoreau works to isolate, articulate, and recontextualize it, placing it, like the botanist’s plant sample in Latour’s example, alongside similar phenomena from other years.

On March 31, 1860, for example, Thoreau notes in his journal: “A yet warmer day. A very thick haze, mountains and all distant objects like a smoke, with a strong but warm southwest wind. Your outside coat is soon left on the ground in the woods, where it first becomes quite intolerable.”<sup>26</sup> The second-person narration<sup>27</sup> here is transformed into a brief notation of the date under the year 1860 and across from the category “First leave off great coat” in the April chart of general phenomena. This particular seasonal phenomenon, one of the few for which Thoreau has an entry for every year recorded in the April chart, was recorded from at least 1851 on with particular care. Moving from the Journal entry to the chart thus represents the transformation of a particular, temporally embedded observation to the record of the changing relation between air temperature and human body across a decade.

It is important to note that Latour’s model of circulating reference does not deny the reality of the observed world or insist that our knowledge of it is merely a product of “social construction”; rather it posits that knowledge is constituted in and by a series of relations and transformations both more complex and finally more enriching than that of mere resemblance. Indeed, “We forfeit resemblance” in Latour’s formulation, but we can, through the circulation and transformation of knowledge “link ourselves” to the real.<sup>28</sup> The *Kalendar* is not a *picture* of the month of April but rather a map, which in Deleuze and Guattari’s sense is defined in opposition to a tracing, or mimetic representation: “Make a map, not a tracing. The orchid does not reproduce the tracing of the wasp; it forms a map with the wasp, in a rhizome. What distinguishes the map from a tracing is that it is entirely oriented toward an experimentation in contact with the real.”<sup>29</sup> Latour similarly invokes the map as a means of making/marking contact rather than a pictorial representation: “By pointing with our index fingers to features of an entry printed in an atlas, we can, through a series of uniformly discontinuous transformations, link ourselves to Boa Vista.”<sup>30</sup>

Like Latour’s model of circulating reference, the understanding of knowing as neighboring that Thoreau describes in the *Journal* and enacts in the *Kalendar* project reflects a movement away from a Cartesian understanding of knowing as mimetically representing the world. To know, in the sense Thoreau developed in these years, is rather to exist in relation with, to be acquainted with, as neighbors are acquainted with one another. About an encounter with a bream (a freshwater fish), he writes: “In my account of this bream I cannot go a hair’s breadth beyond the mere statement that it exists,—the miracle of its existence—my

contemporary and neighbor—yet so different from me! I can only poise my thought there by its side—and try to think like a bream for a moment.”<sup>31</sup> In recognizing that the bream is both “his contemporary & neighbor” and, as a member of another species, irreducibly different from himself, Thoreau suggests a new way of relating to the nonhuman world, one in which the representational epistemology of knowing observer and static observed object is replaced by a model of performative engagement. The unsatisfying “account” of the bream thus gives way to an active effort “to poise my thought there by its side—and try to think like a bream for a moment.” In her account of “posthumanist performativity,” Karen Barad writes that “the performative understanding of scientific practices . . . takes account of the fact that knowledge does not come from standing at a distance and representing, but rather from a direct material engagement with the world,”<sup>32</sup> a description that echoes the way that, for Thoreau, “thought must live with and be inspired with the life of the body,” the way that knowledge emerges from and is constituted by habitual practice, or what he calls “life.”<sup>33</sup>

The resonance of the concept of performativity to Thoreau’s own practices of coming to know the nonhuman world is evident in every aspect of the Kalendar project: its structure and procedure, as well as the categories he selects and individual entries he records. On the first page of the April chart, for example, one of the categories is “Frost still in ground,” with a second line, in pencil (presumably added at a later date) that reads, “Feel it in windows.” Here the external phenomenon of frost is linked to the active experience of *feeling* frost “in the windows” (windows and doors having a special significance for Thoreau as sites of connection between interior and exterior, subjective and objective experience).<sup>34</sup> Perhaps more significantly, the first entry across from this category, for April 30, 1852, reads “At 10 inches deep where I dig parsnips.” That Thoreau chooses to transfer to the Kalendar not only the information about the frost (his particular focus for this category) but the activity that resulted in this knowledge of this particular patch of ground (“where I dig parsnips”) demonstrates that for Thoreau in these years knowledge is both precisely located (“situated” in Haraway’s sense) and practice-based, or in Barad’s sense, performative.

Equally useful for approaching Thoreau’s understanding of knowledge in the 1860s is Barad’s description of what she terms “agential realism,” in which the “primary ontological units are not ‘things’ but phenomena—dynamic topological reconfigurings/entanglements/relationalities/(re)articulations.” Barad’s privileging of the term “phe-

nomena” over the word “things” (or “objects”) signals an important resonance between her ontology and Thoreau’s: as H. Daniel Peck notes, “A phenomenon for Thoreau is an entity that bridges the gap between subject and object; it is the ‘structure’ that holds this dichotomy together and preserves the world from Emerson’s (and indeed, his own) overreaching romantic imagination.”<sup>35</sup> Like Thoreau’s concept of neighboring, which “refuses appropriation without accepting severance” (Pughe 254), Barad’s agential realism does not assume a *merging* of subject and object but rather re-describes these terms as derivative of and contingent upon the local and material conditions of the phenomenon, the temporary products of continually renegotiated boundaries:

It is through specific agential intra-actions that the boundaries and properties of the “components” of phenomena become determinate and that particular embodied concepts become meaningful. A specific intra-action . . . enacts an *agential cut* (in contrast to the Cartesian cut—an inherent distinction—between subject and object) effecting a separation between “subject” and “object.” That is, the agential cut enacts a *local* resolution *within* the phenomenon of the inherent ontological indeterminacy.<sup>36</sup>

This formulation is especially useful as a way of framing Thoreau’s neighboring because, like Thoreau’s, Barad’s approach eschews the subject-object model of knowledge without subsuming or denying the nonhuman by seeking to ground knowledge in subjectivity. Thoreau’s ongoing process of neighboring the nonhuman was a reflection not only of an awareness of his inseparability from the natural world (“Shall I not have intelligence with the earth?” he asks in *Walden*. “Am I not partly leaves and vegetable mould myself?”)—but also of his recognition of the irreducible difference between himself and the nonhuman, the ways in which nature always exceeds and frustrates the Emersonian vision of correspondence.<sup>37</sup>

In contrast to correspondence, *neighboring* suggests both the deep and particular intimacy of dwelling-near, of a shared neighborhood and context, and the distance or difference that, as Stanley Cavell notes, Thoreau articulates in his intent, declared in *Walden*, to “to brag as lustily as chanticleer in the morning, standing on his roost, if only to wake [*his*] neighbors up.” Traversing and retraversing, daily, both the physical terrain of the woods and fields of Concord that constituted his neighborhood and the dense network of texts in which he no less

intimately dwelled, Thoreau enacted knowing-as-neighboring in ways that we are only now coming to recognize. Thoreau's insistence on the value of a deep knowledge of place, his directive that we become "expert in home-cosmography,"<sup>38</sup> reflects an anti-Cartesian view of world and self as mutually constituted and revealed.<sup>39</sup> In this sense, the Kalendar does not seek to represent the natural so much as to make and mark contact with it, to engage it as neighbor. The Kalendar-as-map was constituted by a particular kind of knowledge, not information accumulated through a perspectiveless objectivity but rather what Donna Haraway describes as a "situated knowledge," in which partiality and particular location, rather than universality, are assumed as the basis of knowledge claims.<sup>40</sup> In such an epistemology, "objects" of knowledge are defined and bounded locally, by particular interactions. In this formulation (which echoes in the terms of epistemology Barad's ontological claims),

bodies as objects of knowledge are material-semiotic generative nodes. Their boundaries materialize in social interaction. Boundaries are drawn by mapping practices: objects do not pre-exist as such. Objects are boundary projects. But boundaries shift from within. Boundaries are very tricky. What boundaries provisionally contain remains generative, productive of meanings and bodies.<sup>41</sup>

In compiling the Kalendar charts from his *Journal* and the monthly lists he derived from it, which in turn emerge from his active and daily observation of the natural world, Thoreau inscribes the boundaries of seasonal phenomena in a way that demonstrates both their shifting and their recursive qualities. The category "River when lowest in April" on the April Chart of General Phenomena, for example, contains entries that merely mark the date—"Been going down a month 1 Ap." in 1852)—alongside entries that swell to include the observer—"gone down so that I have to steer carefully to avoid hummocks on meadows" in 1853. The boundaries of the phenomenon under observation shift even within a single entry, demonstrating how such boundaries are always sites of negotiation and flux.

As Peck observes in his analysis of the Kalendar, the phenological charts, closely connected to Thoreau's work as a surveyor, are driven in part by an interest in boundaries, and in particular by the understanding that boundaries (between seasons, between properties, between human and nonhuman entities) require continual and active remaking.<sup>42</sup> In December 1857, Thoreau records a conversation about setting

boundary stakes in which he notes that his whole life had been devoted to “making bounds, or rather finding them, remaking what had been unmade, where they were away.”<sup>43</sup> Most interesting here is the vacillating description of these boundaries as made and found, a description that wonderfully evokes Thoreau’s understanding of his work as *both* a construct and a mode of contact with the real. In this way, Thoreau anticipates those within science studies who seek to oppose the Cartesian “view from nowhere” (Haraway) or “mind-in-a-vat” (Latour) models of realism not with idealism or simple “social construction” but with complex, relational structures of engagement that reflect the view that “matter and meaning are not separate elements.”<sup>44</sup>

### The Kalendar and the Disciplines

The Kalendar manuscripts, because they are not easily assimilable by the critical vocabularies of either scientists or literary scholars, languished until the late twentieth century in a kind of no-man’s land between C. P. Snow’s “two cultures”: too “subjective” to be useful for scientists, too “merely factual”<sup>45</sup> and insufficiently autonomous to be considered components of a literary work. As I have discussed elsewhere, several of the charts of flowering and bird migration have been used by the biologist Richard Primack as part of a longitudinal study of climate change, work that was on display at the Concord Museum’s wonderful exhibit *Early Spring: Henry Thoreau and Climate Change* in 2013. This vitally important work necessarily confines itself to the more strictly “objective” of the charts, those which most systematically record specific seasonal phenomena. The charts of “general phenomena” are equally resistant to both scientific and literary analysis. The entries cannot be converted to data points but neither can they be paraphrased, quoted, or analyzed in terms of something like literary “style.”

Indeed, Thoreau’s refusal to reduce the natural world to a language of symbols is exactly the quality that caused an earlier generation of literary critics to look away from the late Journal and its related charts and lists with something like disgust, frustrated by its lack of recognizably literary material. In this way, we can read the Kalendar as offering not a critique of science from the perspective of literature but a critique of a worldview that rigorously separates the two. Sharon Cameron’s analysis in *Writing Nature*, though a brilliant and important study in many regards, exemplifies the befuddled response of literary criticism to one aspect of Thoreau’s Journal. She remarks with evident incredulity on “the monotony of a record which focuses for twenty-four years

on cyclical change . . . the plotlessness and discontinuity of the story of that change . . . [and Thoreau's] progressive refusal to interpret the observations recorded, *as if the significance of the description of a tree were the description of that tree.*"<sup>46</sup> Cameron's "as if" is telling—might a description of a tree not be meaningful merely in its evocation of an *actual* tree? It is precisely Thoreau's interest in the nonhuman as having a life and a meaning in excess of the Transcendentalist model of correspondence that makes his late work of special interest to contemporary critics concerned with developing new perspectives on the relationship between the human and the nonhuman, and in the roles science and literature may play in that relationship.

The essentially relational quality of the *Kalendar* highlights the particular challenges for scholars approaching any aspect of Thoreau's late work. A close examination of any of the natural history works of the late 1850s and early 1860s—*Wild Fruits*, for example—reveals the way that the information Thoreau gathered in the field was circulated through multiple texts. Given this picture of Thoreau's writing, or rather of Thoreau's writing life, there can be no sufficient reading of a text that does not take into account both the other texts on which he was continually at work and his particularly active processes of textual production. His writing demands that we engage not only the individual works but also the whole lived process of their generation. What is the proper lens through which to conduct such a study? I have suggested here that the interdisciplinary field of science studies, in particular its orientation toward the examination of scientific practices, may provide some useful frameworks. Given Thoreau's extraordinary versatility as a thinker, however, and given the subordination of any act of writing for him to what he called "the art of living," by way of conclusion I'd like to sketch, in a merely suggestive way, some other possible frameworks for approaching these manuscripts.

Michel de Certeau offers one such framework in *The Practice of Everyday Life*, especially in the chapter "Walking in the City." Though aspects of de Certeau's analysis are particular to urban spaces, his central claim of a structural similarity between the practice of walking and the speech act, a similarity that allows us to understand walking as a way of producing meaning, is certainly applicable to Thoreau's practice of walking (and may, indeed, be fruitfully compared with his own meditations on this subject in "Walking"). Given the extraordinarily rich written record of Thoreau's daily life we have at our disposal, we might reconstruct the details of Thoreau's practices of walking and writing

and analyze the particular ways in which these interrelated practices describe a meaningful world. Thoreau suggests the way that these two activities were always, for him, reflexively defined: “I think we may detect that some sort of preparation and faint expectation preceded every discovery we have made. We blunder into no discovery but it will appear that we have prayed and disciplined ourselves for it.”<sup>47</sup> The act of writing “prepared the way” for his observations of the nonhuman, and these observations were in turn transformed into the material body of his writing. These practices, interwoven in more complex ways than we have yet traced, constituted a world of meaning. Each of the activities involved in the construction of the Kalendar—walking, observing, writing, revisiting previous journal entries, chart-making—can be understood as a way of neighboring the nonhuman, and each is connected to all of the others. Walking, Thoreau physically inscribed a series of relations to places repeatedly visited—“E. Hosmer’s meadow,” for example, to cite a topographic fixture of the April charts—in order to track phenomena through the smallest possible increments of seasonal change. Alongside, indeed, as *part of* this tracking of nature, Thoreau tracked his own activities, taking note of both the routine (“first leave of great-coat”) and the unusual (“Tanned by snow” on April 14, 1852). Composing Journal entries enabled him to describe phenomena at length, embedded within the context of the walk and the day, while the relational activity of list and chart-making allowed him to view the phenomena comparatively over time. The Journal and the Kalendar taken together thus present a kind of dual lens, allowing Thoreau to “see” natural phenomena in terms of both their singular and their recursive qualities. The knowledge that emerged from these complex textual activities both spurred and informed his walks, which in turn yielded further observations.

Another approach to the Kalendar might be to understand its practices in terms of what Pierre Hadot has identified as the “spiritual exercises” of ancient philosophy. As Arnold Davidson writes in his introduction to *Philosophy as a Way of Life*, Hadot illuminates the way that much ancient Greek philosophy revolved not around texts but around particular practices: “The teaching and training of philosophy were intended not simply to develop the intelligence of the disciple but to transform all aspects of his being—intellect, imagination, sensibility and will. Its goal was nothing less than an art of living, and so spiritual exercises were exercises in learning to live the philosophical life.”<sup>48</sup> In his later years, Thoreau embraced the study of nature and seasonality

not as a merely intellectual project but as a way of actively making and maintaining the “infinite extent of [his] relations.”<sup>49</sup> The Kalendar project reflects the ways in which Thoreau sought to orient himself toward the nonhuman: not as passive observer but as part of, participant in, the seasonal phenomena he observed and constructed. From the Journal entry from April 10, 1852, we may glean a sense of this orientation in his account of the way in which the phenomenon of light, for example, is constituted by the interaction between sun, water, and a human eye, particularly situated:

From Ball’s Hill the Great Meadow looks more light; perhaps it is the medium between the dark and light above mentioned. (*Mem.* Try this experiment again; *i.e.* look not toward nor from the sun but athwart this line.) Seen from this hill in this direction, there are, here and there, dark shadows spreading rapidly over the surface where the wind strikes the water. The water toward the sun, seen from this height, shows not the broad silvery light but a myriad fine sparkles. The sky is full of light this morning, with different shades of blue, lighter below, darker above, separated perhaps by a thin strip of white vapor; thicker in the east.<sup>50</sup>

Also evident in this passage is Thoreau’s commitment to an *ongoing* engagement with such phenomena: “*Mem.* Try this experiment again,” he instructs a later self, calling to mind both Barad’s model of posthumanist performativity and Deleuze and Guattari’s map, “entirely oriented toward an experimentation in contact with the real.”<sup>51</sup> Indeed, the entire Kalendar project, in its ongoing mapping of Thoreau’s engagements with nature, may be understood as carrying the implicit instruction to a later self to “try this experiment again,” as an aid to the practice of finding and making the boundaries that mark both seasonal phenomena and his relations to the nonhuman.

In a late essay about the philosophical project of *Walden*, Hadot writes that for Thoreau, “the true problem was not to write, but to live in the woods, to be capable of supporting such an experience . . . In other words, the philosophical act transcends the literary work that expresses it; and this literary work cannot totally express what Thoreau has lived.”<sup>52</sup> I evoke Hadot in this conclusion to illustrate the ways in which any single, discipline-specific model, including those I have referenced in this essay, is finally inadequate to our understanding of

the Kalendar project. Thoreau's own philosophical lexicon, in particular his use of the word "neighbor" and its variants, though it may usefully be conceived in relation to these models, provides us with a richer sense of the understanding of being and knowing that the Kalendar project reflects. Thoreau's term, I suggest, relies on the kind of knowing it means to evoke—that is, his conception of knowledge as "neighboring" relies on the *nearness* of that word to us, the way we are already neighboring it. In using this word strangely, Thoreau repeats the gesture characteristic of all of his writing: the making visible by means of making strange our ordinary and infinite relations.

### Notes

1. Bradley Dean, introduction, *Wild Fruits: Thoreau's Rediscovered Last Manuscript*, by Henry David Thoreau (New York: Norton, 2000), xi.

2. Nina Baym, "Thoreau's View of Science." Adapted from *Journal of the History of Ideas* 26 (1963): 221–34. Accessed on July 15, 2013, <http://www.english.illinois.edu/people/emeritus/baym/essays/thoreau.htm>.

3. To make the Kalendar manuscripts available to scholars is the chief goal of *Thoreau's Kalendar: A Digital Archive of Thoreau's Phenological Manuscripts*, which operates with the support of the University of Maine at Farmington and Jon Martin and Joseph Fisher of UMass Lowell. The website will launch with completed TEI transcriptions of several charts of general phenomena in August 2014. In this essay I draw largely on the fully transcribed April charts for textual examples.

4. Rochelle Johnson, *Passions for Nature: Nineteenth-Century America's Aesthetics of Alienation* (Athens: University of Georgia Press, 2009), 183.

5. Henry David Thoreau, *The Journal of Henry David Thoreau*, 14 vols., ed. Bradford Torrey and Francis Allen (Boston: Houghton Mifflin, 1906), 10:165.

6. Laura Dassow Walls, *Seeing New Worlds: Henry David Thoreau and Nineteenth-Century Science* (Madison: University of Wisconsin Press, 1995), 4–5.

7. Thoreau, *Journal*, 9:157.

8. Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no. 3 (1988): 575–99, 58; <http://www.staff.amu.edu.pl/~ewa/Haraway,%20Situating%20Knowledges.pdf> (accessed February 4, 2013).

9. William James discusses the difference between "knowledge of" and "knowledge about" in his *Principles of Psychology*: "I am acquainted with many people and things, which I know very little about, except their presence in the places where I have met them. I know the color blue when I see it, and the flavor of a pear when I taste it; I know an inch when I move my finger through it; a second of time, when I feel it pass; an effort of attention when I make it; a difference between two things when I notice it; but about the inner nature of these facts or what makes them what they are, I can say nothing at all. I cannot impart acquaintance with them to any one who has not already made it himself. I cannot describe them, make a blind man guess what blue is like, define to a child a syllogism, or tell a philosopher in just what respect distance is just what it is, and differs from other forms of relation. At most, I can say to my friends, Go to certain places and act in certain ways, and these objects will probably come" (New York: Dover, 1918, vol. 1, 221).

10. Thomas Pughe, "Brute Neighbors: The Modernity of a Metaphor," in *Thoreauvian Modernities: Transatlantic Conversations on an American Icon*, ed. Francois Specq, Laura Dassow Walls, and Michael Granger (Athens: University of Georgia Press, 2013), 249–64, 254.

11. Thoreau, *Journal*, 10:4.

12. See, for example, Perry Miller, introduction, *Consciousness in Concord: The Text of Thoreau's Hitherto "Lost Journal," 1840–1841* (New York: Houghton Mifflin, 1958); and Nina Baym, "Thoreau's View of Science."

13. Thoreau, *Journal*, 11:360.

14. David Robinson, *A Natural Life: Thoreau's Worldly Transcendentalism* (Ithaca, NY: Cornell University Press, 2004), 182.

15. One thinks, for example, of Heidegger's assertion that "language is the house of Being" or Wittgenstein's that "the limits of my language mean the limits of my world."

16. Thoreau, *Journal*, 1:61; William James, "What Pragmatism Means," in *Writings: 1902–1910* (New York: Library of America, 1987), 505–22, 515.

17. Thoreau, *Journal*, 10:127.

18. Thoreau, *Journal*, 9:363.

19. Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge, MA: Harvard University Press, 1999), 2.

20. Guided by a relational epistemology derived from Thoreau, William James, and others, I want to acknowledge here the contingency of my own position as a scholar and the extent to which I am both making and discovering the connections articulated in the pages that follow. For a more extensive explication of this stance, see Kristen Case, *Pragmatism and Poetic Practice: Crosscurrents from Emerson to Susan Howe* (Rochester, NY: Camden House, 2011).

21. Graham Harman, "Bruno Latour: Prince of Networks," in *Toward Speculative Realism: Essays and Lectures* (Alresford: Zero Books), 168–69.

22. See Walls, "Thoreau's Technology of Inscription," in *A Historical Guide to Henry David Thoreau*, ed. William Cain (Oxford: Oxford University Press, 2000); and Rossi, "Thoreau's Multiple Modernities," in Specq et al., eds., *Thoreauvian Modernities*, 56–68.

23. Latour, *Pandora's Hope*, 34.

24. *Ibid.*, 38.

25. *Ibid.*, 58.

26. Thoreau, *Journal*, 13:235.

27. One of the fascinating features of Thoreau's interest in seasonal phenomena as recorded in the later years of the *Journal* is a recurrent switch between first- and second-person narration, which seems to mark a transition from an individual experience to the experience of a general seasonal phenomenon. For example: "More worm piles in yard not seen since morning of the 20<sup>th</sup>, on account of cold, etc. You will see these earlier on warm banks, as at Clamshell earlier than in our yard. These little piles on the bare earth like dimples on water remind you of April" (13:233).

28. Latour, "Circulating Reference," in *Pandora's Hope*, 79.

29. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (1988; New York: Continuum, 1988, 2004), 13.

30. Latour, "Circulating Reference," 79.

31. Thoreau, *Journal*, 11:358–59.

32. Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (2003): 49. <http://humweb.ucsc.edu/feministstudies/faculty/barad/barad-posthumanist.pdf> (accessed December 10, 2013).

33. Thoreau, *Journal*, 5:122.

34. For a more extended discussion, see "Intelligence with the Earth: Henry Thoreau, Charles Olson and the Poetics of Place," in Case, *American Pragmatism*, 99 ff., and 121n. 6.

35. H. Daniel Peck, *Thoreau's Morning Work: Memory and Perception in "A Week on The Concord and Merrimack Rivers," the Journal, and "Walden"* (New Haven, CT: Yale University Press, 1990), 68.

36. Barad, *Meeting the Universe Halfway*, 148.

37. As Robinson observes, "Kinship and wildness—these were the polar principles that drove Thoreau's deepening investigation of the workings of nature around his Concord home. Motivated by both a sense of familiarity with plants and a contrasting recognition of their strangeness, he saw his botanical work as a way of approaching a mysterious power that could never finally be penetrated" (Robinson, *A Natural Life*, 180).

38. Henry David Thoreau, *Walden*, in *A Week on The Concord and Merrimack Rivers; Walden, or, Life in the Woods; The Maine Woods; Cape Cod* (New York: Library of America, 1985).

39. This view bears an important relationship to both pragmatist and phenomenological understandings of the relation between mind and world. Dewey, for example, insists on an interactive model of knowing as a necessary correlative of the theory of evolution: "If the living, experiencing being is an intimate participant in the activities of the world to which it belongs, then knowledge is a mode of participation, valuable in the degree in which it is effective. It cannot be the idle view of an unconcerned spectator" (*Democracy and Education: An Introduction to the Philosophy of Education* [New York: Macmillan, 1922], 393). This formulation is echoed by Heidegger's assertion that "the world is disclosed essentially along with the Being of Dasein"

(*Being and Time*, trans. John Macquarrie and Edward Robinson [New York: Harper Collins, 1962], 247).

40. Haraway, "Situated Knowledges," 598.

41. *Ibid.*, 595.

42. Peck, *Thoreau's Morning Work*.

43. Thoreau, *Journal*, 10:232.

44. Karen Barad, *Meeting the Universe Halfway* (Durham, NC: Duke University Press, 2007), 4.

45. Perry Miller once famously dismissed Thoreau's late *Journal* as "the tedious recordings of mere observations, of measurements, of statistics" attesting to "the dwindling of [Thoreau's] vitality" and the "exhaustion of the theory on which he commenced to be an author in the first place" ("Thoreau in the Context of International Romanticism," *New England Quarterly* 34, no. 2 [1961]: 147–59, 158–59).

46. Sharon Cameron, *Writing Nature: Henry Thoreau's Journal* (Chicago: University of Chicago Press, 1988), 4–5. Italics mine.

47. Thoreau, *Journal*, 9:53.

48. Pierre Hadot, *Philosophy as a Way of Life: Spiritual Exercises from Socrates to Foucault*, ed. Arnold I. Davidson, trans. Michael Chase (Oxford: Blackwell, 1995), 21.

49. Thoreau, *Walden*, x.

50. Thoreau, *Journal*, 3:394–95.

51. Deleuze and Guattari, *A Thousand Plateaus*, 13.

52. Pierre Hadot, J. Aaron Simmons and Mason Marshall, "There Are Nowadays Professors of Philosophy, but Not Philosophers," *Journal of Speculative Philosophy* 19, no. 3 (2005): 229–37. <http://muse.jhu.edu/> (accessed October 13, 2013).