A natural history of the mind: Edwards, Emerson, Thoreau, Melville

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A NATURAL HISTORY OF THE MIND:
EDWARDS, EMERSON, THOREAU, MELVILLE

by

Michael E. Jonik

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For Polona
Abstract

This project examines how eighteenth- and nineteenth-century American writers drew on European natural science and philosophy – specifically in terms of concepts of form, perception, and experience – to open new possibilities for thinking the relationship between the mind and the physical world. In each of the moments of American intellectual history here considered – the natural theology of Calvinism, the idealistic natural history of Transcendentalism, and the movement towards an evolutionary process-philosophy of Pragmatism – “place” becomes not only geographical location, but a dynamic field of interactions of natural historical, literary, theological, and philosophical knowledge. I trace this through the writing of four exemplary figures: Jonathan Edwards, Ralph Waldo Emerson, Henry David Thoreau, and Herman Melville, each of whom situates his writing within the expanding spaces of American physical, mental and spiritual terrain, and each of whom comes to both extend and challenge the theoretical assumptions and empirical bases of European thought. If science provides them with more intimate knowledge of the constitution of the world, these writers at once realize that the force of life challenges accepted scientific knowledge and its means of classifying nature or defining the human.
Acknowledgments

As with all things, this work was a collaborative effort. I have amassed innumerable debts in writing this project – to friends, colleagues, staff, and professors at the University at Albany and beyond, to the Emerson Society, the Thoreau Society, the Olson Society, and the Melville Society. I would like to especially thank the Emerson Society for awarding me their 2008 Research Grant, and the Thorns family, the Graduate Advisement Committee, and the College of Arts and Sciences for their generosity in awarding me both a Summer Thorns Fellowship and a Richard Thorns Dissertation Fellowship. My committee, Branka Arsić, David Wills, and Don Byrd, shaped this project from its beginning, nurtured it, tolerated its persistent reformulations, and helped me to see it through. What they have given me can never be repaid – except through the life’s work they have opened before me. Wyn Kelley’s close reading and generous feedback late in the project proved essential; this project bears the imprint of her magnanimity and grace of intellect. I would like thank my parents and sister for their love and continuing support, even from far away; Babi Lija without whom solitary afternoon thoughts would not have been possible and the project never completed; my sister-in-law, Ana; my cousin Stephen for all of his efforts on my behalf; and LMK for its resources. My two children, Luiza and Lucian, both came into the world along with this work. It will accompany, but never equal the joy they have brought me in this time. And above all I cannot thank, because words break off long before where such deep gratitude could be articulated, my wife, Polona. This work and all of my work is dedicated to her, in enduring love, and loving endurance.

Velenje, Fall 2009
# Table of Contents

Copyright ............................................................................................................................................... ii

Abstract ................................................................................................................................................ iv

Acknowledgments ................................................................................................................................. v

Table of Contents ................................................................................................................................ vi

Introduction. From *Terra Incognita* to the Place of the Mind ............................................................... 1

1. Perception and the Materiality of Bodies in Jonathan Edwards’s Natural Philosophy ............... 40

2. “Powers of the Mind”: Natural Science and Intellect in Emerson’s Later Thought ................. 84


4. An Archipelago of Enchanted Forms: Melville’s Galapagos ......................................................... 180

Notes ................................................................................................................................................... 221

Bibliography ........................................................................................................................................ 239
Every ship that comes to America got its chart from Columbus. Every novel is a debtor to Homer. Every carpenter who shaves with a fore-plane borrows the genius of a forgotten inventor. Life is girt all round with a zodiac of sciences, the contributions of men who have perished to add their point of light to our sky. Engineer, broker, jurist, physician, moralist, theologian, and every man, inasmuch as he has any science, - is a definer and map-maker of the latitudes and longitudes of our condition. These roadmakers on every hand enrich us. We must extend the area of life and multiply our relations. We are as much gainers by finding a new property in the old earth as by acquiring a new planet.

Ralph Waldo Emerson

Our minds are not here to simply copy a reality that is already complete.

William James
Introduction

From Terra Incognita to the Place of the Mind

Morphology rests on the conviction that everything that exists must express and indicate itself. The first physical and chemical elements to the spiritual manifestation of the human being serve to confirm this fundamental principle. We turn immediately to what has form. The inorganic, the vegetative, the animal, the human – each expresses itself, each appears as that which it is to our outer sense and to our inner sense. Form is a moving, a becoming, a passing thing. The doctrine of forms is the doctrine of transformation. The doctrine of metamorphosis is the key to all signs of nature.

Goethe, from “On Morphology”

We may, therefore, safely study the mind in nature, because we cannot steadily gaze on it in mind; as we explore the face of the sun in a pool, when our eyes cannot brook his direct splendors.

Emerson, from “The Method of Nature”

According to the concrete differences of the terrestrial globe, the general planetary life of the nature-governed mind specializes itself and breaks up into the several nature-governed minds which, on the whole, give expression to the nature of the geographical continents and constitute the diversities of race…This diversity descends into specialties, that may be termed local minds—shown in the outward modes of life and occupation, bodily structure and disposition, but still more in the inner tendency and capacity of the intellectual and moral character of several peoples. Back to the very beginnings of national history we see the several nations each possessing a persistent type of its own.

Hegel, from Philosophy of Mind

1. Mapping the conceptual transatlantic

This project examines how eighteenth- and nineteenth-century American writers draw on European natural science and philosophy – specifically in terms of concepts of form perception and experience – to open new possibilities for thinking the relationship between the mind and the physical world. In each of the moments of American intellectual history here considered – the natural theology of Calvinism, the idealistic
nature of Transcendentalism, and the movement towards the evolutionary process-philosophy of Pragmatism – “place” becomes not only geographical location, but a dynamic field of interactions of natural historical, literary, theological and philosophical knowledge. We will trace this through the writing of four exemplary figures: Jonathan Edwards, Ralph Waldo Emerson, Henry David Thoreau, and Herman Melville, each of whom situates his writing within the expanding spaces of American physical, mental and spiritual terrain, and each of whom comes to both extend and challenge the theoretical assumptions and empirical bases of European thought.

These writers could be said to mark the shift in late eighteenth-century natural philosophy from an idea of fixed, permanent form to an idea of metamorphic (or “temporalized”) form as paradigmatically stated by Goethe. This key departure from natural theology serves as the epistemological background to how nineteenth-century American writers will understand their intellectual, scientific, geographic, and socio-political places. If Edwards' theology will operate within the dynamic order of the Newtonian picture of the universe, Emerson, Thoreau, and Melville will perpetuate the unhinging of classificatory schemes from their predetermining systems (the divine order, the Great Chain of Being, Linnaean taxonomy), and orient themselves within the shifting landscapes of evolutionary thought. They pursue the implications of an active, organic picture of the mind; they extend perception, no longer the ability of an “elect” to see divine omnipotence in nature, into an embodied process of transacting with and experiencing a multiple, changing world. They work to break up the philosophical or rhetorical continuities connecting empirical experience to imperial expansion; they
tirelessly prompt us to rethink “our place,” without need of the guarantees of fixed order or substantialist ground.

Form is multiple and metamorphic – in miniature this will be the central thought of nineteenth-century American literature and philosophy. Yet its unfolding in the work of Emerson, Thoreau and Melville will serve to extend, along a sort of conceptual vertebra, much broader concerns than those of any mere formalism. By positing a world of interactive, fluid forms – the world in which we find ourselves – these writers seek to articulate the demands of an ongoing negotiation, a negotiation which bears not only on our perception of nature, but on the nature of perception. This ongoing negotiation is inseparable from our political and cultural situations; in fact, it defines them. At the center of this, and in many ways at the center of the history of ideas in America, is how we have come to think of this negotiation, made difficult by this place we call America, a terra nova of thought and action.

To begin to register how this thought unfolds in the work of these writers entails first a double situation: on the one hand in the context of American intellectual history, and at the same time in the context of the transnational interchange of scientific and philosophical ideas in which they found themselves engaged. These contexts are inextricably interlinked – despite what nationalist or exceptionalist stories some scholars of American literature might tell – to the extent that “American Literature” or “American Thought” can only be said as an anonym, or “place-holder,” for an active field of interactions. The task here, in part, is to diagram this field of interactions, to reanimate relationships between writers, scientists, philosophers and theologians, and thus between texts and concepts. It is also to create new sets of texts, new concepts and constellations
of concepts to better allow us to understand not only past, but present and future configurations.

It should be said at the outset that to mark the multiple trajectories of American thought – and the various strands of multinational traditions within these – cannot be to retrospectively impose a linearity of development on the history of American ideas. At each point, mobilizations of American thought, whether in terms of philosophical, literary, theological, or scientific disciplinary methodologies, or in “movements” such as Puritanism, Transcendentalism, Ohio and St. Louis Hegelianism, Evolutionism, Naturalism, Pragmatism, etc, upon closer inspection challenge emplacement in any neat chronology. There is no direct lineage or fixed schema, for example, for how various theological dogmatisms, philosophical idealisms, natural histories, literary romanticisms, and/or political structures emerged into American terrain, or became transplanted from their European seedbeds. There is no direct “anxiety of influence” that can explain an individual writer’s work either; in fact, it is probably more pertinent to speak of an “excess of influence” (to borrow a phrase from Emerson) for the writers here considered. Often considered as part of a movement, in the final analysis, none can be said to either embody or be limited by that movement. In each, whether through the sermon, essay, lecture, poem, journal entry, letter or fictional text, etc., there is rather a redirecting of sources and systems, a pick-up of random ideas, a dynamic recombination of topoi. Despite the explicit interest of each in science and philosophy, each shares a common distrust of systematic thinking and institutionalized knowledge. And, perhaps with the exception of Edwards, the work of each writer could neither be said to crystallize into a system nor is it wholly asystematic. Each could be said to inhabit the ethos of Schlegel’s
Athenaeum Fragment #53: “It is equally fatal for the mind to have a system and not to have a system. One must try to combine them.” For Emerson in *Natural History of Intellect*, this “combination” opens a new, unrestrained geometry of thought, one that allows itself to remain incomplete, one free to follow the “vast curve” of things as they are:

I cannot myself use that systematic form which is reckoned essential in treating the science of the mind…I might suggest that he who contents himself with dotting a fragmentary curve, recording only what facts he has observed, without attempting to arrange them within one outline, follows a system also, - a system as grand as any other… I confess to a little distrust of that completeness of system which metaphysicians are apt to affect. 'T is the gnat grasping the world. All these exhaustive theories appear indeed a false and vain at-tempt to introvert and analyze the Primal Thought. That is up-stream, and what a stream! Can you swim up Niagara Falls?

(Emerson *CW12*:11-12).

This combination of the systematic and asystematic should not be confused with a lack of rigor; it exercises a different type of rigor than that with which any axiomatic philosophy or traditional metaphysics would be comfortable. This rigor, the rigor of what could be called “literary thinking,” is what Emerson will call the “gaya scienza” – it uses writing as means to draw together and redistribute various forms of knowledge, not as a fixed or completed place of knowledge, but as a site of its ongoing convergences and divergences. The general claim here is that to honor the *topoi* of their literary thinking, one should, in a quite literal sense, understand their writing in the vigorousness of its movement: across traditional disciplinary boundaries, in an exfoliating motion and multiplicity, in the wise inconsistencies that mark and remark it as it spreads in many directions, digresses, regresses, meets dead-ends, or displaces itself.
That we cannot impose a linear progression on the history of American ideas (nor on the structure of influence), that we cannot impose a unified outline onto the science of the mind, are each not to avoid recognizing important shifts and ruptures that indeed took place. Rather, the task of the critic is to map them. Following Franco Moretti’s discussion of maps in *Graphs, Maps, Trees*, such a map would trace a “literary sociology” – “a fingerprint of history, almost” (57). For Moretti, this involves thinking of form in terms of force. As he explains via a notion borrowed from D’Arcy Thompson’s *On Growth and Form*, form is a “diagram of forces,” a geometry of plural, active forms. Projected as a map, this diagram of forces exceeds any two-dimensional representative Cartesian space. Literary maps – those embedded in a text, or those that serve as atlases for interconnected texts, are mappings of forces and counter-forces; they detail distortions of any orderly, organized (geometrical) patterns of activity, of dead or living forms (56). “Deducing from the form of an object the forces that have been at work” is thus, for Moretti, “the most elegant definition ever of what literary sociology should be” (57). Any map, including this “transatlantic” map of American thought, is such a diagram of forces; it details the conceptual ruptures and interruptions that have marked the formation of American literary geography, both from within and from without. In a broader sense, it makes legible the mosaic history of thought in the United States in its multiform transactions with Europe, Africa, Asia, and the rest of the Americas, without recourse to the restricting methods of canonization or static notions of place which endorse them. It changes the accent of American studies: rather than thinking influence in terms of the chronological topology of a time-line, or as a unidirectional “immigration of ideas,” instead it becomes an integrative map of forces knotted together and stretched out, a map
of interconnected, dispersive, local intensities. Literary maps, as diagrams of forces, open new terrains for thinking this expanding space, this pluriverse. They make us reflect on our place – especially when who or what this “our” includes can never go without saying. But, like any map, literary maps cannot give us directions for every situation we will face, only landmarks by which to orient our further movements.

Along these lines, although through different genres and with different emphases, Edwards, Emerson, Thoreau and, Melville each detail a unique landscape of the mind. In so doing, each uniquely superposes planes of reference from contemporary natural science, theology, literature and philosophy in varying levels of intensity. This superposition is very much like the type of map in which there are multiple, translucent sheets that overlay a basic map, adding layers or color schemes that indicate resources, demographics, roads, etc. This super-positioning is not a hierarchical layering; it constitutes a lateral plane, a legible constellation, an extended surface of intersecting lines. Their understanding of the relationship between place and the mind in nature is thus colored. That is, to understand the “intimacy” of place and nature as Stanley Cavell says – or in D.H. Lawrence’s terms the “spirit of place” – in eighteenth- and nineteenth-century American literature and thought is to peel back these overlain (overland) maps, and each time to trace new maps, to follow new lines.¹ This super-positioning complicates any notion of “place” as singular – including the place of the mind in nature (or for Hegel the “local mind” he develops in his anthropology). Place, or the place of thought, is a metonymy for “elsewhere” – a superposition of “here” and “there.” As a multiple site of heterogeneous knowledges, American writing knots various philosophical, literary, theological, and scientific threads, themselves of neither wholly
American nor European provenance. It is this “meshwork” (or “Geflecht” to use Freud’s term) that analysis – whether scientific analysis, textual analysis, topoanalysis, or even psychoanalysis – can begin to disentangle, though never definitively separate.

To take a specific example, it is not so much then a question of whether Colonial American philosophers, writers, natural scientists, or theologians merely applied or misapplied contemporary European enlightenment natural philosophical ideas; rather it is to understand how the commerce of ideas and social forces at once meted out different polymorphous possibilities for Europe and America alike. The transatlantic intercourse of ideas and specimens speaks to this. Cotton Mather’s voluminous oeuvre (especially his letter exchange with the Royal Society of London dealing with the “curiosa Americana”) is marked by its careful interweaving of elements from both contemporary European natural science and a localized Puritan hermeneutics. In general, Mather used gains in the sciences as ever more certain evidence of the immanence of divine power and creativity, thus constructing a rational theology to accommodate the (visible and invisible) wonders of New World natural phenomena. To this end, Mather, if remotely, contributed to the emergence of the “natural history” of the time; yet – because of his geographical displacement from Europe – his work stood as heterogeneous to the discourse as it presented itself, complicating its empirical bases and often challenging its fundamental presuppositions. On this basis, Mather, as well as other Pre-Revolutionary American thinkers, often resisted the so-called “Enlightened” European scientific community. As David Levin writes:

Mather ridicules European ignorance of the New World just as emphatically as his illustrious successors Benjamin Franklin, Thomas Jefferson, and Washington Irving would do. As Franklin would mimic European credulity by pretending to admire the grand leap of whales
chasing cod up to the top of Niagara Falls, so Mather dismisses the biblical misreading that says Americans (savages only or colonists as well?) belong to “The Things under the Earth” that will one day bow down to worship Jesus. Long before Buffon would even be old enough to speculate that natural phenomena in America are inferior in size and quality – a century before Washington Irving’s narrator would go to England to see the great race “from which I am degenerated” – Cotton Mather tells the Royal Society that “one must be as ungeographical as the Dayes of Lactantius,” to admit” (such a) spurious reading of revelation (754).

Mather’s scientific work drew confidence from what became central to the Puritan hermeneutic: the notion that God’s ongoing self-revelation in nature necessarily took place in America. Just as the exiles of the Hebrew Testament were led across the barren Sinai to their promised Judea, so were God’s chosen people now drawn across the cold North Atlantic to the rugged shores of New England. To deny this, was to deny the legitimacy of the experience of the New World; it was to be not only “ungeographical,” but blasphemous about any proper reading of revelation. Yet revelation was not only located in terms of the grand differences of continental geography. Much of Puritan theology inhabits the threshold between the visible and the invisible, in the molecular inter-space where divine providence quietly labors. Thus Mather had especial interest in interlinking Calvinist religious dogma with Newtonian physics, Leeuwenhoekian microscopy, as well as a wealth of other scientific works by prominent European thinkers such as John Ray, Vesalius, van der Spiegel, and even Descartes. His 1721 natural historical/natural theological compendium, The Christian Philosopher, alone implicates him as a direct commentator in the botanical, anatomical, medical, and geological debates of the time. Like Mather’s, Jonathan Edwards’ thought does not merely present a derivative, eccentrically theological, or provincial version of European philosophy, but
rather draws on in-depth encounters with the thought of Hobbes, Newton, Locke, Henry More, Malebranche, and Hume to theorize the relationship between the material and immaterial. Edwards emphasizes the role of perception in humanity’s true path to conversion and assurance within his highly rarefied and elegant philosophical picture of the universe. Perception of the physical world directly communicates the “excellency” of the relatedness of all beings, including God’s own intimate involvement with the world. Edwards reorganizes how we understand and put to use perception by articulating a complex semiotic (or typological) method for interpreting divine presence in the natural world. Along with Mather, his thought marks a major turning point in the American thinking of form, nature, and perception in terms of the mind’s emplacement by reconfiguring the diverse intellectual and social forces of the European Enlightenment in the context of early American theology.

We could cite many other examples from early America, all of which layer a complex intellectual geography nineteenth-century American writers will inherit, resist, and transform. This intellectual geography is not necessarily restricted to its inheritance from a “New England mind,” but from a heterogeneity of domestic and foreign sources. Thus it is not that either American thinkers developed their own native philosophies, or imported everything from European counterparts; rather American thought developed through multiple transatlantic and intracontinental channels and reciprocal networks of concepts and materials. Benjamin Franklin, who cites Mather’s *Bonifacium* as a direct influence, nonetheless discards the rigid Puritan scheme to become a sort of secular engineer who purportedly puts nature and thought to good use for himself and others. His substantial work in natural philosophy (of course including his much-mythologized foray
into understanding electricity), in conjunction with his efforts to propagate this knowledge in his juntas and societies (e.g. the American Philosophical Society) drew together a wealth of natural historical details that he happily and often boastfully took with him to Europe.\(^3\) For example, he undertakes a prolonged correspondence with David Hume (including a famous letter on the structure of lightning rods which Hume had read before and published by the Edinburgh Royal Society); he directly influenced Hume’s thinking of civic virtue, and perhaps provides a model for Hume’s own autobiography *My Own Life*.\(^4\) Thomas Jefferson, like Franklin, used political prominence to further his natural historical pursuits, as is the case with his *Notes on the State of Virginia*, and his famous correspondences with Buffon and Chastellux concerning “American degeneracy” (and his refutation of these prejudices in *Notes*), as well as with Alexander von Humboldt, John Manners, and Joseph Priestly. Part of the charge for the famous Lewis and Clark expedition (for which Jefferson gave explicit instructions to Lewis for the collecting of specimens, mapping of natural phenomena, and interaction with Native Americans) was indeed to catalogue the richness and immensity of the *terra incognita* of North America to prove to Europe such claims were inaccurate. The work of Franklin and Jefferson (as well as Paine and others) ushered in a new wave of Enlightenment thought in America. They rearticulated and remobilized this thought, in terms of the more famous influences of Locke’s notion of property on American Revolutionary thinking, or via the more subtle influences of Scottish Common Sense philosophy, Paine, Malthus, Adam Smith, Rousseau, and the French Encyclopedists on Jefferson’s ideal of a polity of natural rights. In sum, the work of these writer-scientists, or politicians of natural history, stood in both a supplemental and agonistic relation to
Enlightenment literature and natural philosophy; it is therefore mistaken to read them as merely a degraded continuation of European thought.\textsuperscript{5}

As we turn to the work of Emerson, Thoreau, and Melville, we find a series of “American” writers who actively work to displace their “inheritance.” Each of these writers works to break down the explicit nationalisms that map thought, nationalisms that continue to operate through the opposition of what is named “Europe” and what is named “America.” This becomes challenging work in the wake of the American nation’s defining moments and first mobilizations of its national mythology of Manifest Destiny in a variety of real political situations. Barbara Packer concisely reports on the complex multinational intellectual climate of the 1820s in which New England Transcendentalism emerged, if not on the diversity of the “movement” itself:

The young men and women around Cambridge who read these works delighted in a portrait of the individual mind and its relationship to nature that made ordinary perception seem revelatory and ordinary maturation Odyssean. It bothered no one that the Romanticism intoxicating Cambridge was decades old, and the Kantianism even older, or that the ideas being hailed as revolutionary were a jumble of bits and pieces torn from their contexts and served up by a haphazard collection of editors, translators, and book reviewers. If anything, this blurring of historical distinctions contributed to the sense of excitement. The fruits of a half century of European progress in literature, philosophy, natural science, and sacred criticism all arrived on American shores more or less at once – Swedenborg and Schleiermacher, Herder and Strauss, Kant and Schelling, Goethe and Wordsworth, de Staël and Coleridge. Such opulence could hardly fail to suggest that the world was on the verge of a remarkable synthesis (27).

The work of “Transcendentalists” Emerson and Thoreau effected and sustained this “remarkable synthesis.” In Emerson’s case, to the extent that he calls for an “American Scholar” who will cease to rely on the “courtly muses of Europe,” any interpretation of
his own work that neglects the creative redeployment of a variety of European sources (and later Asian sources) would do it a severe disservice. To Packer’s list, we could easily add dozens of foreign influences of Emerson: Plato, Plotinus, Montaigne, Carlyle, Cousin, Oken, Hegel, Sainte-Beuve, Faraday, the long list of “grandees” of eighteenth-century French natural history, and countless more, the cosmopolitan milieu that will accompany him from his early lectures to his late work. Likewise, Thoreau’s science cannot be understood devoid of his engagements with Agassiz, Alexander von Humboldt, and Darwin; nor can Melville be separated from his rewritings of Shakespeare, Spenser, Schopenhauer, and Darwin as well. Charles Sanders Peirce was said to have spent several hours a day for three years in memorizing Kant’s _Critique of Pure Reason_ (itself a textbook for American idealism); Dewey was early an avid Hegelian. William James celebrates the utilitarianism of John Stuart Mill and the _Anschauung_ of Charles Renouvier; he sharply critiques Hegel’s monism, counterposing to it the multiple earth-thinking of German psycho-physicist Gustav Fechner (a primary influence on Freud) and the creative becomings of Henri Bergson. None of these citations is to detract from their American influences, but to show that lines of influence are necessarily a tangled business, such that something like an “American” influence (and the same goes for a “European” influence or any influence) covers over a wealth of interconnected concepts and texts. That the “remarkable synthesis” effected by Transcendentalism was not necessarily a complete synthesis (as Packer herself insinuates), again underscores and energizes the necessity of a literary mapping. Each of their movements remaps the internal and external forces that shaped the dynamic field of interactions that is American literature and thought. On this basis we can deepen our understanding of the transatlantic
by reintegrating American thought into the conceptual constellations traditional 
canonization has heretofore prohibited.

2. “The record is alive”
This brings us more explicitly – if at this point still only indirectly and contingently – to 
what will be the operative concept for our reading eighteenth and nineteenth-century 
American literature and thought: the concept of the place of the mind. Our goal, that is, is 
not only to deduce a literary sociology or to draw a literary map, although these certainly 
give us our conceptual orientation for relating place, thinking, and writing in what will 
follow. For thinking to “take place” we must map these shifts involving understandings 
of form, space, place, perception, nature as inseparable from their actual content. A 
cartography of the “place of the mind” then entails that thinking of place becomes the 
very place of thinking and writing. “I have lately been surveying the Walden woods so 
extensively and minutely,” Thoreau notes in his Journal on New Year’s Day, 1858, “that 
I now see it mapped in my mind's eye - as, indeed, on paper” (MV25:33; 01/01/58). In 
general, in the writing of Edwards, Emerson, Thoreau, and Melville we find this is 
developed as an interactive continuity, or super-positioning (but not identity) of 
landscape, mindscape and textscape. This is admittedly different in each writer’s work, 
yet in each there is a new understanding of the place of the mind in nature – a natural 
history of the mind – hung in the balance. This extends the notion of Moretti’s “literary 
geography” as a “diagram of forces”; it is a radical re-inscription of “intimate” 
knowledge into the thinking of place and the place of thinking.6
When we say the “place of the mind,” then, this is not the fixed place or exact anatomical location of the brain that Franz Joseph Gall’s phrenology tried to ascertain. It is not merely the place of the complex of neurological phenomena driven by biochemical transactions as a reductive “biological materialism” would want to hold. Even Freud, while he accepts Gustav Fechner’s cue to explore the “other place” of “psychical territory,” will refuse to locate the unconscious anatomically. The place of the mind cannot be fixed to the certainties advertised by “philosophy of mind” or cognitive philosophy, whose world-less grammars and formal computational logics serve to map only their own self-enclosed propositions. Rather it refers to how in Edwards, Emerson, Thoreau, and Melville the relationship of the natural world and thought becomes another way of talking about this intimacy – or what we could now call the “extimacy” – of thinking and place. Extimacy, as “excluded interiority” or “intimate alterity,” is neither inside nor outside, but inside-outside. Like the body, the place of the mind cannot be said to be wholly outside or inside (empirical or ideal) but it is a projection or introjection, an opening. The mind becomes the pore of experiences. Put differently, the mind is a perpetual disenclosure to place, an ongoing unfixing of place in perception, a negotiation of forms and forces. Thinking becomes another name for non-appropriative negotiations such as dwelling, walking, seeing, living, naming, etc. Thinking becomes an opening of the perceiver to the phenomenon in a way that serves to dissolve the dualism that holds the two apart. Thoreau, in a *Journal* entry from 1857 gives us a figure for this dissolution:

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 of you, and not as it is related to you. The important fact is its effect on me...
philosopher for whom rainbows &c can be explained away, never saw them. 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) (MV24:609).

Experience, in turn, becomes a micro-politics of opening oneself to the world. That experience involves form and perception is to say that what is at stake is a convergence of or co-presence of the mind-place. How our experiences traverse landscape, mindscape, and textscape, how the natural world is composed of forms-forces which suffuse us and we perceive, and how we are suffused and how we perceive is not delimitable from our experience will be the philosophical problematic that informs these considerations.⁸

To focus this problematic, we will concentrate our investigation to how this intimate thinking of place becomes sustained in each writer by natural science and philosophy. How does science for Edwards, Emerson, Thoreau and Melville allow them to know the world more intimately? At the same time, how do they realize that the force of life – as recognized by Edwards in terms of an ordered series of events of material bodies in collision and motion guided by divine providence, by Emerson as the manifold becomings of form, by Thoreau as a world of particulars with which we are intimately related, or by Melville as a diverse physical world marked by the departure of God – at the same time challenges scientific knowledge and its means of representing or classifying nature? What is at stake in a writing of nature that works to present life in its force, that is, in a way that does not fix its forms to a representationalist scheme or predetermined metaphysical system? How can such a writing of nature adduce embodied modes of perception and experience? How do science and natural philosophy affect, and let themselves be affected by, modalities of literary expression? As Emerson will say in his late essay, “Poetry and Imagination”: “Science was false by being unpoetical. It
assumed to explain a reptile or mollusk, and isolated it, - which is hunting for life in graveyards. Reptile or mollusk or man or angel only exists in system, in relation. The metaphysician, the poet, only sees each animal form as an inevitable step in the path of the creating mind (CW 8:10). How could a “poetical” science – a type of science at one with the flower of Romanticism - enrich our understanding of our inherent living relationality with and within nature?

The relation of the mind to nature, of course, has a long history, which we can briefly outline in order to see the profundity of the interventions of American writers from Edwards to Melville (if not more generally from Cotton Mather to William James, the context in which we can consider them). Indeed, it would be a vast understatement to say that the intimate relationship between the mind and its place in nature has often been the subject of philosophical investigation. Arguably every major “Western” philosopher has taken it up as his or her concern, from pre-Socratic mythographers to contemporary thinkers of bio-politics and geo-philosophy. At best, here we can point to just a few pertinent examples that serve as the philosophical background for the work of these eighteenth- and nineteenth-century American thinkers, examples which probe the place of the mind in terms of form, perception, and experience. Plato’s cosmology in the *Timaeus* consists in a fluid dualism which cleaves the visible world from the world of ideal eternal forms, and a third term, *khora*, which makes possible this cleaving.\(^{11}\) Aristotle refocuses Platonic dualism as the dichotomy of Matter and Form and opens a dynamic intercourse between a functional conception of *psyche* as living Form and place as a fixed vessel in space out of which things can re-locate.\(^{12}\) Aristotle, unlike Plato, does not eschew change for eternal fixity, but comes to think change as movement over
stable ground, the “Unmoved Perfection that is the cause of all motion” (Lovejoy 55). Aristotle’s *scala natura*, built on the related conception of continuity, posited a logical hierarchical relationship between all living forms, a natural archive – or diagram of forces – reaching up from the physical to the metaphysical. As the *scala natura* perdured throughout Antiquity and the Arab world, as it became the spine of Mediaeval Scholasticism and early modern rationalism and natural theology, the human mind found its place at the highest pinnacle of the physical, reaching like Adam’s finger across the ceiling of the Sistine Chapel to the waiting hand of the Divine.

Leibniz, poised at this division in the Chain, is the great philosopher of its reordering. As he writes in *Specimen Dynamicum*, he seeks to “extend and illustrate with new discoveries” the “Peripatetic doctrine of forms and entelechies,” yet his monadic thought will rearticulate Aristotle’s “ladder” as a harmony of mutual coexistences (Leibniz 155). In his 1698 text “Explanation of Bayle’s Difficulties” he shows this in terms of his differences with Cartesian extension: “In extension” he writes, “we are conceiving of an order among coexistences; but we should not think of it, any more than space, as though it were a substance. It is like time, which presents to the mind only an order of changes. And as for motion, what is real in it is force of power; that is to say what there is in the present state which carries with it a change in the future. The rest is only phenomena and relations” (207). Unlike the Cartesian *cogito* that confronts the world in its extension, in the “Baroque territories” Leibniz opens for contemplation, the mind becomes subject to a perpetual negotiation of forces, folds, and elasticities. These are non-localizable, monadic, universal representatives, such that a single mind “is worth the whole world, since it not only expresses the world, but also knows it, and governs
itself there after the fashion of God” (89). The mind becomes the “most perfectible of
substances” and in its “nobility of nature” comes “as near to the divinity as is possible for
mere created beings” (89). He calls for a polity of “excellent minds,” over whom God
would reign as “absolute monarch of the most perfect city or republic, such as is the
universe composed of all minds” (89). Leibniz’s philosophy of mind thus radicalizes the
natural theological understanding of nature as the expression of divinity, and closes the
abyssal gap between the two. By reconceiving the world’s vitality and dynamism, this
vis viva of matter as living force, Leibniz in part makes possible the “temporalization of
the Great Chain of Being” that will be wrought by late eighteenth-century natural
scientists and the German Naturphilosophes, as well as the dispersal of the divine mind
into a pantheistic conception of nature. A return to this concept of living force, over
against the Cartesian conception of matter as inert extension, coupled with this reordering
the place of the mind in nature, opened a way to surmount the nagging dualisms of
subject/object, real/ideal, and mind/nature, showing each to be radically interdependent
and part of an immanent, organic conception of nature.

This temporalization could be characterized in terms of a decisive rupture in the
thinking of form – from a notion of form as a fixed attribute or enduring shape, into a
thinking of form as transition. But like any epistemological shift, it was not sudden and
complete, but marked the usual play of outdated ideas lingering with “progressive”
elements. To map this pervasive shift in all its fullness – in all of its complexities and
debates, forces and counter forces – would inevitably pull us outside of our scope. Even
Foucault who, in The Order of Things, extensively diagnoses the moment of this
“epistemological rupture” (indeed as a “mutation in the natural dimension of Western
“culture” during the late eighteenth-century, during which the Classical system of natural history became articulated as a “philosophy of life” (and later biology)), for the most part restricts his discourse to its French-speaking protagonists. And there are many: Buffon, Cuvier, Jussieu, Geoffroy St-Hilaire, Lamarck, Bonnet, Maupertuis, Diderot, d’Alembert, Robinet, Tournefort, Adanson, et. al.). Yet this precisely avails an opportunity to fill out the picture, to map this shift not as exclusive, but inclusive of the forceful American response to French natural science and German Naturphilosophie.

To better see this, we can briefly dwell further on the American response to Kant and Goethe. As Packer insinuated above, Kant’s Transcendental Idealism outlined in his first Critique radically displaced the Lockean empirical picture of the mind. Kant’s critical philosophy set strict limits for the thinking of science as within the realm of the epistemological, and reconfigured all the basic questions for enquiries into natural law and the place of the mind in the phenomenal world. Even if his epistemological limits would be radically overstepped by followers in Germany, England and America alike, Kant provided the terms for the thinking of space, perception, and experience, etc. Likewise, Kant’s third Critique – through such notions as organic “purposiveness” and teleological judgment – adumbrated an active, organic picture of the mind essential to the Romantic conception of life, translated in the post-Kantian languages of Goethe and Schelling, Wordsworth and Coleridge, and Emerson, Thoreau and, implicitly, Melville, etc. In this context we can hear Perry Miller’s assertion in “From Edwards to Emerson,” concerning the “importation” of Kantian philosophy:

The question of how much in the transcendental philosophy emerged out of the American background, of how much if it was not appropriated from foreign sources, is a question that concerns the entire American tradition…[Y]et if the particular formulations achieved by Emerson and
Thoreau, Parker and Ripley, were restatements of a native disposition rather than amateur versions of *The Critique of Pure Reason*, then we who must also formulate our traditions may find their philosophy meaningful, if not for what it held, at least for whence they got it (Buell 14-15).

Here the contention is that it is not a question of a “native disposition” or an “importation” – thus the work of American Transcendentalists are not merely “amateur versions” of Kant’s first *Critique* – but that the complex networks of the conceptual transatlantic allowed for Kant to exert a profound, though in some cases only indirect, implicit or oblique, effect on the American mind. In the decades to follow, “Kant’s cartographers” (to borrow a phrase from Joan Richardson), will remap his “land of pure understanding” or the “geography of Pure Reason” onto the terrain of American idealism, from Emerson’s tracing of his “Transcendentalism” to “Kant from Konigsberg,” to Peirce’s announcing a new name for an old way of thinking out of the distinction in Kant between the *praktisch* and *pragmatisch*. In the hands of each, Kant will be re-understood and re-deployed: Emerson will work to bring Kant’s Transcendental Aesthetics into a thinking of nearness and everyday life, in which the Intellect serves the life of the farm and the street, the life of practical power. Thoreau’s orientation towards particular knowledge and understanding of perception marks him, if not a direct reader of Kant, as ineluctably inhabiting the post-Kantian landscape of thought. Melville, as Charles Olson celebrates, revises Kantian spatial intuition (in terms of congruence and projective space) in *Moby-Dick*, transforming Kant’s mapping of space into a writing of local, flexible physicality (Olson 123).

Yet it is Goethe’s scientific work, especially that on plant morphology and animal anatomy, that renders this shift in form most simply and elegantly, and which thus exerts the most direct and enduring influence over nineteenth-century American thought.
Goethe becomes a great model for Emerson – he becomes not only a representative “writer,” but an “earth writer,” a “poet-scientist.” In thinking of form as force and multiplicity, the poet-scientist *displaces* the mind – the mind that thinks itself as individual and separate from nature, that finds endorsement in predetermined categories and classifications. To perform this displacement is to reorient ourselves towards a return to intimacy, to help us to “get back in place.”¹⁹ For Emerson the “poet-scientist” is endowed with the responsibility to reorder and rename the world, to undertake an “imaginative classification,” an ongoing revision of the text of the world.

Central then are Goethe’s innovations in the thinking of form and perception. Goethe comes to understand *morphe* as *metamorphosis*, which demands form to be thought in its fugacity rather than in its fixity. Form becomes the “manner of flowing,” a “rhythm of life,”²⁰ which opens classification into an active negotiation of ongoing natural processes. As Goethe writes in *On Morphology*: “When something has acquired a form it metamorphoses immediately to a new one. If we wish to arrive at some living perception of nature we ourselves must remain as quick and flexible as nature and follow the example she gives” (64). To follow a living perception of nature mobilizes the order of the world. This is a departure from the eighteenth-century system of classification and, as a consequence, the conception of form on which it rested. If form is thought as transition, classification can no longer base itself on Linnaean atemporal similarities and differences. This entails a different “flexibility” than even that which Jefferson (as late as his February 1814 letter on natural classification to John Manners) celebrated in the Linnaean system – the flexibility which allows newly discovered species to be inserted or added to an existing table. Here Goethe insists on a flexibility at another level: not only
was the classification system itself capable of additions, but must accommodate the
differentiating motions of metamorphosis at every point. For Emerson, Goethe thus
defends life from the rigidity of Linnaean taxonomy by detecting “amid littleness and
detail” the “Genius of life, the old cunning Proteus”; and, despite “whatever loss of
French tabulation and dissection,” because of him “poetry and humanity remain to us.”
Insofar as *morphe* becomes *metamorphosis*, form becomes formation. As Elaine Miller
reports, Goethe can then “critique the notion of *Gestalt* on the basis that it excludes what
is changeable, thus proposing instead for a notion of cultivation, *Bildung*” (E. Miller
47). This thinking of *Bildung* will quickly exceed the scientific realm and find itself put
to work in a variety of pedagogical, philosophical, political, and literary settings (as
perhaps epitomized by the Romantic *Bildungsroman*). It comes to articulate a dynamic
notion of Self that is not fixed to a particular identity, but is rather open to change,
improvement, if not moral perfectibility. Thus formation is not just apropos of natural
forms of rocks, plants and animals, but of the perceiving-thinking scientist (or poet-
scientist), as well. As Goethe indicates in his “Significant Help Given by an Ingenious
Turn of Phrase”: “my thinking is not separate from objects…the elements of the object,
the perceptions of the object, flow into my thinking and are fully permeated by it…my
perception itself is a thinking, and my thinking a perception…[e]very new object, clearly
seen, opens a new object of perception in us” (Goethe 64). For Goethe, the work of
perception is to penetrate the divine forces of nature via an intuitive, imaginative
movement from the empirical phenomenon to the archetypal. In addition to his work on
morphological botany, Goethe’s theorization of perception as actively mediating subject
and object became a major tone for Emerson and other thinkers in the American
nineteenth-century.

That a temporalization of form which Goethe details in his notion of
metamorphosis entails a rupture in the thinking of form is not to claim that previous to
that there was no notion of dynamic life – indeed the Greeks had conceptualized *dynamis*
as characteristic of life. But now form itself was no longer imprisoned to the
hylomorphic model Aristotle had proposed, nor to the consequent ordering of forms as
species on a *scala natura*. Things were now to be thought in their becoming, in their
internal movements and differentiations, rather than as the more or less extensive, inert
Cartesian bodies. In contradistinction to Descartes, German *Naturphilosophen* “revived”
Leibnizian elastic and forceful monads, and the immanent, expressive modes or attributes
of substance of Spinozism. It is in fact a renewed interest in Spinoza and Leibniz in
Goethe and German Idealistic philosophy which supplemented the Kantian innovation in
form and space, exacerbating this shift in the idea of form. Although the name “Spinoza”
had become a dirty word in German intellectual life as the Enlightenment reached its
crisis (to claim to be a Spinozist was to claim pantheism, even atheism, as the famous
“Pantheism Controversy” of 1786 indicated), in a few years Goethe would cite Spinoza
as one of his prime sources with Shakespeare and Linnaeus. Schelling would
unabashedly turn to Spinoza to articulate what he saw to be the necessary supplement to
Kantian Critical philosophy - namely to give it a monistic ontological foundation.

Goethe similarly seized upon Spinoza’s thought to extend Kant’s *intelluctus archetypus*
to a thinking of the whole of nature, such that Ur-Phenomenon became the well-spring of
the vast variety of natural forms. As Goethe will ask in his short piece on Kant,
“Judgment through Intuitive Perception”: “Why should it not also hold true in the intellectual area that through an intuitive perception of eternally creative nature we maybe become worthy of participating spiritually in its creative processes? Impelled from the start by an inner need, I had striven unconsciously and incessantly toward primal image and prototype, and had even succeeded in building up a method of representing it which conformed to nature. There was nothing further to prevent me from boldly embarking on this ‘adventure of reason’ (as the Sage of Konigsberg himself called it)” (Goethe 32).

Change itself had changed. Consequently the work of natural history and natural philosophy was less that of finding the origins and localities of preformed species, but a thinking of an organism in its genesis and epigenesis. This draws the attention away from external characteristics to the internal motions, regulations, and inner-rhythms – the mechanisms of metamorphosis from within. This “was the beginning,” as Foucault says, “of what, by substituting anatomy for classification, organism for structure, internal subordination for visible character, the series for tabulation, was to make possible the precipitations into the old flat world of animals and plants, engraved in black and white, a profound mass of time to which men were to give the renewed name of history” (138).

Coincident with this temporalized thinking of form, was a thinking of transhuman temporalities such as the deep-time debates in geology over whether time of earth-processes as irruptive or gradual (Lyell, Playfair, and Hutton), as well as a realization that human temporality, in terms of the evanescence of “life-experience,” was slowly becoming detached from the fixities of divine Truth and intervention.
At the same time, that form is fluid does not necessarily lead to the “temporocentrism” that Ed Casey finds in nineteenth-century thought, namely that thinkers like William James, but also Hegel, Marx, Kierkegaard, Darwin, Bergson, “believed in the hegemony of time” at the expense of thinking of place and space (x). Far from a mere temporalization – far from a forgetting of place and space – by positing the “place” of the mind as dynamic (as a displacing of thinking) opened a method of historical geography, a “tracking of the earth in time” to borrow a favorite phrase of Olson’s, that drastically reopened place rather than “subordinated” it to a to “temporal domination”(x). It is precisely this dynamic conception of place that helped these writers negotiate the ever-complexifying epistemological, scientific, aesthetic, and political worlds into which they were directly thrown. This becomes evident in how Kant’s followers each reoriented his project towards a thinking of the place-world. Schelling’s famous formula – “mind is invisible nature, while nature is visible mind” – thus attempts to give an image of thought to the radical emplacement of organic processes. Schelling traces the genesis of consciousness as coming out of nature, and through a different notion of the a priori, attempts to reveal the transcendental from within the empirical, a task both Goethe and Emerson will, although with fundamental differences, take up as their own. The modality of ordering was no longer simply spatial, it now involved a spatio-temporalized notion of form as process, as being in becoming, as in-between and on-the-way. This warranted the living table of evolution that the century was already beginning to register and would find its synecdoche in the name of Darwin. American writers at the beginning of the nineteenth-century synthesized a variety of forces and elements: their synthesis extended and transformed American idealism up to
this point and marked the battle ground for all those who would resist this idealism in the years to follow.

3. Locations and Times

Let us now look more closely at the structure of the work to follow. In the first chapter, “Perception and the materiality of bodies in Jonathan Edwards’s natural philosophy,” of key concern is how Edwards uses Enlightenment natural philosophy to give a rational foundation to his theology. Edwards, like Cotton Mather, employs Newtonian science (as well as the thought of Locke, Malebranche, and More) to theorize God’s power and creativity in physical nature. Yet Edwards will not rest where Newton’s idea of matter stops and Mather remained content, nor at the limits of the mind Locke circumscribed. He walks a narrow corridor between the occasionalism of Malebranche, the materialism of Hobbes, the new-Platonism of More, Cudworth, and Smith, the idealism of Berkeley, and the associationism of Hume, as well as, of course, the theological investments of his latter-day Calvinist contemporaries. He develops a theory of perception on the basis of differential spatial relationships, in which each object is seen as one of a series of continuing events, and to which divine intelligence is immanent rather than an external mechanical cause. Edwards thus details a new typology that extends to the perception of all of nature, and thus recasts traditional ideas of God, freedom, morality, beauty, and the place of the mind in the universe. To this end, Edwards places key emphasis on the material universe, as is evidenced by his lifelong engagement with natural philosophy. Natural philosophy, for Edwards, then, opens the possibility of our renewed relationship to the object-world; it gives us clearer eyes to see, and more refined understandings of
that which we find before us. Scientific enquiry enables the detailed, exact seeing necessary to truly perceive God’s excellency, “the proportion of his acting” amidst the relations of all things. In turn, Edwards’ science becomes poised at the threshold between the physical and metaphysical, visible and invisible, where the subtle marks of the divine are to be read.

Emerson, like Edwards, celebrates the mind as relational; but where Edwards begins with Lockean empiricist psychology and Newtonian physics, Emerson takes as his point of departure Goethe, Coleridge, Kant, Hegel, and Schelling. This is the focus of my second chapter, “‘Powers of the Mind’: Natural Science and Intellect in Emerson’s Later Thought,” in which I analyze how Emerson’s writing and thinking are underscored by a fluid idea of natural form and classification drawn from the romantic conception of life. Emerson’s early work is marked by the search for an “animate theory of nature,” for a tableau vivant of living forms. Goethe’s metamorphosis thus informs his writing and thinking from his encounter at the Jardin des Plantes in 1833, to his subsequent early lectures on nature and the book Nature, to his mature essays and later lectures. He takes it up in “Experience” in terms of the flux and flow in which we are always implicated, which disallows us any certainty, fixity, or direct contact with our own experience, such that we can never feel the jagged reality of our own lament. The figure of the leaf-bud bursting into flower becomes a central, if not the central metaphor of Emerson’s thought. Metamorphosis underwrites Emerson’s organic notion of mental structure, and leads him to posit intellect as actively constructing and imaginatively classifying the world. This culminates in his late, unfinished project, “Natural History of Intellect” in which he attempts to write a “metaphysics” of everyday life through attention to the “natural facts”
of our ongoing intellectual immersion into place. Yet, in writing his “natural history,” Emerson refuses to work from the predetermined starting point of metaphysical systems; he thus works to dispense the detached abstractions of these, to bring philosophy into the street – the active world of forms we must constantly negotiate. As the mind is a natural fact, nature becomes a topos for thinking itself. He seeks to compile a series of “Mémoires pour servir toward a Natural history of the Intellect” (Emerson CW 12:14-15), pictures of the mind, “a Farmer’s Almanac of mental moods” (CW 12:11) in which the laws of nature are taken as the laws of the mind. Thus he deepens his ongoing concern with the “Method of Nature,” finding the place of the mind in nature: “And as mind, our mind or mind like ours reappears to us in our study of nature…therefore our own organization is a perpetual key, and a well-ordered mind brings to the study of every new fact or class of facts a certain divination of that which it shall find” (CW 12:20).

Emerson’s concern with how to write his system has added historical interest if we recall the extensive influence of Hegel on American thought – including on Emerson – during the time of Emerson’s later writing. Emerson’s work importantly, if obliquely intersected that of Hegel, whose philosophy of freedom, nature, and civil history Emerson often cites, as is the case in his “Natural History of Intellect” lecture course. Yet Emerson’s interest in Hegel was by no means one of unconditional acceptance. Whereas he celebrated Hegel’s conception of a “rhythmic unfolding of nature,” like Goethe he could not accept Hegel’s logical understanding of nature as the incarnation of the Concept. In contradistinction to Hegel, Emerson devotes his “science of the mind” to understanding life and experience as we find it, in its plurality and incompleteness. In this regard, Emerson approaches the critiques of Hegel’s monism that William James,
Peirce, Royce and Dewey would effect in the decades to follow. This gives us a clearer picture of later Emerson’s relationship not only to this emerging Pragmatist thought, but also to the thought currents of his time more generally: Hegelianism, evolutionism, psychology, physics, and positivist philosophy, all of which, like Emerson, were engaged in rewriting and reorienting the place of the mind in nature.

Thoreau’s thought, like Emerson’s, is famously in transit. Chapter three, “‘The maze of phenomena’: Perception and Particular Knowledge in Thoreau’s later Journal,” follows his relentless pursuit of particular knowledge in his observing, collecting, and cataloguing natural phenomena in his Journal project. For Thoreau, perception relies on a “fluid reciprocity” between particular observations and evolving categories of knowledge (Peck 87). Thoreau thus posits an “ecological” perception in which perceiving is understood as a form of action, an ongoing negotiation of a living, diverse world. Yet Thoreau does not locate his active perception only in invariant externalities; rather he urges us to learn to transact with nature from within nature. As he asks in Walden, “Shall I not have intelligence with the earth? Am I not partly leaves and vegetable mould myself?”(432). He calls us to enact a radical re-inscription of “intimate” knowledge into the thinking of place and the place of thinking, so to gain clear sight of “the maze of phenomena” in which we are implicated. His wild earth-thinking is one of movement (he “saunters,” as he writes as epigraph to A Week – “I sailed up a river with a pleasant wind, /New lands, new people, new thoughts to find”). Experience, in turn, denotes our ongoing experiment of living in a world of difference and uncertainty, the negotiation of the unknown, the unclassifiable – things we might encounter while walking. Each new configuration we enter demands a new beginning, a reorientation and
reexamination of our position and perceptual apparatus. For Thoreau, the intimate exteriority and extreme intimacy of his relationship with place, as mediated by natural history, philosophy, classical reference, or the literature of exploration, affords new opportunities to enact a politics of perception, if not a politics of the earth.

My fourth chapter, “An Archipelago of Enchanted Forms: Melville’s Galapagos” is devoted to Herman Melville’s series of “sketches” of the Galapagos Islands from *Piazza Tales*, “The Encantadas, or Enchanted Isles.” As in the cetology chapters from *Moby-Dick*, Melville emphasizes in the sketches how the physicality of living nature defies any scientific system of closed or fixed classification. As Olson has compellingly shown: “Logic and classification had led civilization toward man, away from space. Melville went to space to probe and find man” (19). Later, in his “Materials and Weights of Herman Melville,” Olson spells this out in even greater detail:

Melville’s importance, greater than ever, lies in (1) his approach to physicality, (2) his address to character as necessary human force, and (3) his application to all phenomena as the ordering agent – what Creeley and I have elsewhere called the Single Intelligence, which is a better way of naming the total intelligence, simply that it is never more than the given man’s act in the presence of his multiples. Melville, a major figure just because he did take on the multiple when no one else saw it, and did risk havoc and wreck, had his formula for the distinction: he opposed ‘Right Reason’ to reason, dubbing reason and her tools – logic and classification – ‘Baconism’ (Olson 116).

The place of the mind in Melville could thus be rendered in terms of this multiplicity – it is the restless “archipe-logic” of the “and” – or better the “and…and…and…” – the open-ended series whose terms are both contingent on, and perpetually deform each other. This openness becomes performed by the “form” of the archipelago. The archipelago, as a both a topography and an active trope in Melville’s writing, suggests an alternative
logic of taxonomy, a dynamic holding-in-tension of fragmentary and often divergent elements, texts, and experiences. Melville constructs his “archipelago” by rewriting scientific texts such as Darwin’s *Voyage of the Beagle*; South Seas travel narratives; colonial histories; *The Tempest*; *The Fairie Queen*; and, his own earlier writings and observations. I argue that “The Encantadas” thus inhabits the tense intersection of science and literature, natural philosophy and theology. As if registering Darwin’s nullification of divine providence in guiding the changing world, Melville comes to inscribe the failure of the metaphysical into the physicality of the grotesque creatures and barren landscapes of the Galapagos. Melville shows us that it is only from within the multiplicity of the physical that – despite the risks of wreck and havoc – one can be reborn and start again.

Through the work of Emerson, Thoreau, and Melville life in its processes came to be understood as exceeding any fixed position in a system of classification or coordinates on a map. This therefore called for new senses of both classification and cartography, for new natural and political taxonomies to accommodate the ever-shifting situations and positions. Whereas these political implications will for the most part necessarily fall outside the scope of this study, we can note in closing a few remarks on their “politics of the earth.” The work of each begs the (still open) question of humanity’s position in the place-world, not only among political situations, but as implicated in manifold inter-species relationships and inorganic and organic couplings. They provide figures for the tasks of contemporary thought: of how to think a new people and a new earth, and new relationships to life and place, as the ground perpetually shifts beneath our feet. Whether one accepts the closure of metaphysical thinking or undertakes to write a new, immanent
earth-metaphysics to address this task, the relationship between the mind and its place in nature is of key importance. The ontology of any classification scheme – whether posited on the basis of an arbitrary scheme of resemblances like that of Linnaeus, on the strict “inner necessity of the Notion” as Hegel attempts to rigorously determine in his *Philosophy of Nature*²⁶, in terms of the self-ordering of Darwin’s natural selection, or in terms of Whitehead’s modes of processes and concrescences – each posits the place of the mind in nature, or writes a natural history of the mind. Yet the consequences of any classification are not only ontological or epistemological, but political. In Leibniz’s case, his dynamic classification opened a utopian thinking that resisted fixing space to any ego-centric coordinates, yet one that was still subject to the tyranny of an all-powerful God. In less-nuanced philosophies, classifications became applied to anthropological differences, so to dehumanize members of certain races, genders, classes, or ethnicities. Buffon’s biogeography in his multivolume *Natural History* (for example) used the notion of the Great Chain of Being to legitimate the actions and expansions of colonizing nations, inevitably placing Europeans above the peoples they enslaved. Buffon’s work directly inflected the thinking of both Kant and Jefferson, and many other thinkers and writers of the Enlightenment, the era of the most pronounced slave-trading and colonial expansion. As Thomas Pynchon wryly, but rightly, shows in his *Mason and Dixon*, the Chain of Being could become both a restraining chain for those with a divergent genetic double helix, or, when taken horizontally, a surveyor’s chain for measuring out possibilities for geographical and economic domination (Pynchon 417-418).

Although both a linear chronology and the movement of westward expansion are perhaps implied by the movement from Edwards’ Puritan New England to Melville’s
Pacific, the disorienting aspect of these writers’ thinking at once goes against this grain. They work to dissolve the rhetorical continuity that connects empirical experience to imperial expansion, work that is connected to these epistemological and formal concerns. Edwards preached to the Mohawks of Stockbridge, defending their right to education and often bringing them into his home. Emerson deploys his thinking of “Intellect” as central to his political and anti-slavery writings, as in his commemoration of the British Emancipation of the West Indies. For Thoreau, reorienting perception becomes a means of resistance – he joins his thinking of natural history and place to that of “action from principle,” by which “the perception and the performance of right, - changes things and relations; it is essentially revolutionary, and does not consist wholly in any thing which was. It not only divides states and churches, it divides families; aye, it divides the individual, separating the diabolical in him from the divine” (“Civil Disobedience” 7). Melville creates an “outlandish” politics that dissociates colonial histories and representationalist schemes. This displacement of inheritance also resists the prejudice that American literature and philosophy, from its multiple points of inception to its current situation, is derivative or secondary to European thought. This concern is explicitly that of Stanley Cavell, who famously asks in Senses of Walden: “Why has America never expressed itself philosophically? Or has it – in the metaphysical riot of its greatest literature? Has the impulse to philosophical speculation been absorbed, or exhausted by speculation in territory, as in such thoughts as Manifest Destiny? Or are such questions not really intelligible?”(33). The argument here is precisely that America has expressed itself philosophically, that these questions are intelligible, and, far from being absorbed or exhausted by speculation in territory (despite the great risk that this
exhaustion presents), American literature and thought rather opens new possibilities for thinking “territory” itself – or, more precisely, for joining thought to territory. This is not to fix thought to territory, to repatriate it or “globalize” it. To, in Emerson’s phrase, “extend the area of life and multiply our relations” is rather to rethink the earth and our dwelling in it as a dwelling in movement. It is to think the passage by which accepted classificatory schemes became unhinged from their predetermining systems and dissolved and redistributed into an ontology of processes as at once intellectual and political. As we have emphasized, questions of form are not abstract, “formalist” concerns of disembodied intellects, but a way in which embodied intellects make sense of their constant immersion in fluid forms of life.

A multiple, transitional notion of form – and with it an ongoing, imaginative classification – drives how Emerson, Thoreau and Melville will understand their geographical, biological, and socio-political places, how these places are navigated, how they are written and rewritten, how they change. Emerson, Thoreau, and Melville work to radically displace the Euro-centrist and anthropocentrist position of the Great Chain of Being and with it the strictures the history of the relationship of the mind to nature had up to that point imposed. They work to understand the criteria Whitehead in his *Concept of Nature* lays out to be the “necessary prolegomena” for philosophy and for natural science: namely “a thorough understanding of the types of entities, and types of relations among those entities, which are disclosed to us in our perceptions of nature” (48). This is especially the case as this multiform of entities and relations could no longer be grounded to a unique Substance or set of substances to which they all are merely attributes. French
phenomenologist Maurice Merleau-Ponty, in his 1956-57 Lecture Course at the College
de France on “The Idea of Nature in Whitehead,” draws out this point:

There is no longer the means to consider the different phenomena as
revealers of several substances, or as the attributes of a unique Substance.
The unity of Nature, according to Whitehead, is grounded on this: that all
Nature is “concrescence”…The task of a philosophy of Nature would be
to describe all the modes of processes, without grouping them under
certain headings borrowed from substantialist thinking. The human is a
mode just as much are animal cells. There is not a limit to the abundance
of categories but there are types of “concrescence” that pass by
degradations of each other (Merleau-Ponty 122).

Throughout the nineteenth century, American writers and thinkers will do much to sheer
the thinking of nature and the place of the mind in it away from a fixed metaphysical
ground, the ground Edwards so elaborately lays out. They will thus approach the
understanding of nature in terms of concrescences which Whitehead will offer in the
early part of the twentieth century. They will offer manifold descriptions of nature in its
modes of processes and varieties of entities.

As we find the mind entangled in the world, as inside-outside distinctions are
made permeable, ideas like human agency and writing become indistinguishable from the
earth’s own self-writing.29 We are complicit in writing the autobiography of the earth.
We are complicit with – but not necessarily above – the ongoing self-organization of the
world, the spontaneously expanding and “persistently innovating biosphere” (as Stuart
Kauffman says). We are less the culmination of a Great Chain of Being than complicit
with all organic and non-organic entities, including “impersonal” self-organizing events
such as climate change, seismic activity, or even genetic mutation. This does not
evacuate human responsibility nor delimit human agency, but rather posits human agency
within a web of agencies simultaneously occurring. We dramatically shape our
surroundings as we participate in their self-shaping. As the mind is subjected – or to use Whitehead’s term “superjected” – to the world, it does not forget the uncertain center of human subjectivity, but redistributes this center into an expansive network of “intimate alterities.” This redistribution opens a new sense of possibility for an old politics of the earth – one based on new inter-species, organic-inorganic, or techno-prosthetic inter-organizations. The place of the mind becomes shorthand for the open site of negotiating this array of moving forms, modes of processes and relations, as one of these forms and modes, inseparable or immanent to them. Walt Whitman, in a sequence from “By the Roadside,” asks its central question:

Locations and times – what is it in me that meets them all, whenever and wherever, and makes me at home?  
Forms, colors, densities, odors – what is it in me that corresponds with them?

Or as Emerson famously asks in “Experience”: “Where do we find ourselves?” – what is our place amidst all these things that “swim and glitter,” how are we to understand our condition, if its most “unhandsome part” is that all objects, in their “evanescence and lubricity,” will only “slip through our fingers?” Or, as William James articulates in his famous image of thought in the wake of these writers, the stream of consciousness, perception is continuous amidst a constant flux of multiple moving forms. Whitehead’s notion of concrescence, a thought much closer in affinity to James’s radical empiricism or even to Leibniz’s universe of coexistences and forces than to any logical positivism, culminates this. For Whitehead, as he shows in *Process and Reality*, concrescence is the coming into being of the actual (concrete) as the internalization of natural processes, natural processes whose movement and multiplicity bear on our direct and indirect experiences.
To find ourselves amidst these experiences, “without recourse to substantialist thinking,” is to remap the place of the mind as a diagram of the forces that we shape and shape us – this is the natural history of the mind these writers trace out, and invite us to continue. As we enter a time that will be marked by its politics of the earth – as the genome is mapped, manipulated, and artificially fabricated, as ecological crises and shortages of resources exert greater demand on citizens and policy-makers, as philosophers and theoreticians work to understand the possibilities of a post-human thought – to understand the place of the mind is not only to indulge the formal concerns or theoretical interests of previous centuries, also it is to fundamentally ask how this thinking addresses the necessities of the twenty-first century. How American writers negotiated their world – and how the conception of mind and nature they employed can perhaps make us more at home our contemporary place-world – will be both the burden and delight of this study. To this we can only add, in Goethe’s terms, a stimulus to further thought, a friendly greeting, and a “spontaneous outburst”:

“Spontaneous Outburst”

“Into the core of Nature” –
O Philistine –
“No earthly mind can enter.”
The maxim is fine;
But have the grace
To spare the dissenter,
Me and my kind.
We think: in every place
We’re at the center.
“Happy the moral creature
To whom she shows no more
Than the outer rind,”
For sixty years by years I’ve heard your sort announce.
It makes me swear, though quietly;
To myself a thousand times I say:
All things she grants, gladly and lavishly;
Nature has neither core
Nor outer rind,
Being all things at once.
It’s yourself you should scrutinize to see
Whether you’re center or periphery. (Goethe 37-38)
Chapter 1

Perception and the Materiality of Bodies in Jonathan Edwards’ Natural Philosophy

“Jonathan Edwards (1703-1758)”

Far from the marketplace, the city’s roar
from mutating time, eternal now at last,
Jonathan Edwards dreams and makes his way
through the shadows trees of golden foliage cast.
Today is tomorrow and yesterday.
In God’s cloudless cosmos all things hold
Him in exaltation mysteriously,
the gold of evening and the moon of gold.
Blissful, he thinks the world an everlasting
instrument of God’s wrath, the heaven all seek
reserved for the happy few whom God acquits,
the lot of everyone else the fires of hell.
In the very center of the tangled web
another prisoner, God the spider sits.

Jorge Luis Borges

For the invisible things of him since the creation of the world are clearly seen,
being perceived through the things that are made.

Paul, Romans 1:20

1. Sweet to me the thunder and lightning

In addressing the “peculiarities” of experiences of conversion, William James, in The
Varieties of Religious Experience, notes that those who enter a “state of assurance” – in
addition to a sense of renewed wellness in the world and a sense of new insight into life’s
mysteries – report an “objective change which the world often appears to undergo” (228).
The bleak, confused world of the sick soul, clouded by the melancholies of folly and
sinfulness, dissipates before a “sense of clean and beautiful newness within and without”
(228). The “face of nature” becomes transfigured, “a new heaven seems to shine upon a
new earth” (142). To further illustrate this point, James cites from Jonathan Edwards’

own account of conversion:

    After this my sense of divine things gradually increased, and became more
    and more lively, and had more of that inward sweetness. The appearance
    of everything was altered; there seemed to be, as it were, a calm, sweet
    cast, or appearance of divine glory, in almost everything. God’s
    excellency, his wisdom, his purity and love, seemed to appear in
    everything; in the sun, moon, and stars; in the clouds and blue sky; in the
    grass, flowers, and trees; in the water and all nature; which used greatly to
    fix in my mind. And sweet to me the thunder and lightning; formerly
    nothing had been so terrible in me. Before, I used to be uncommonly
    terrified with thunder, and to be struck with terror when I saw a
    thunderstorm rising; but now, on the contrary, it rejoices me (James 228-
    229).

The passage, culled by James from Sereno Dwight’s 1830 edition of the *Life of Edwards*
(though itself a excerpt from Edwards’ *Personal Narrative*) supports James’ task
throughout *Varieties* of detailing how the complexion of the concrete particulars of
experience, of humanity’s physical existence in the world, can be altered by the perceived
presence of God operating in human affairs. Physicality is not abnegated at the expense
of the metaphysical, as in an ecstatic moment of mystical transcendence. Rather the
physical world takes on even greater significance; it is calmer and sweeter, more lively
and joyous – more *alive*.

The passage at the same time unfolds an idea that dwells at the center of
Edwards’s thinking – namely that the perception of the natural world is never just a
lifeless transcription of the external features of objects, but a seeing, animated by ideas,
of the divine at work within the world. To come to this thought, Edwards famously
draws on Locke’s empiricism, in which the external world is not expendable but
essential: the materials of reason and knowledge are to be founded on and derived from
experience. As Locke writes in his *An Essay Concerning Human Understanding*, “[o]ur Observation employ’d either about *external sensible Objects; or about internal Operations of our Minds, perceived and reflected upon by our selves, is that, which supplies our Understandings with all the materials of thinking*” (Locke 54). As all ideas only come from sensation or reflection, Edwards thus concludes that it is through perception that we can come to understand how all beings, including God, exist in fundamental harmony. He rejoices in this harmony, the blushing face of nature he exposit throughout his spiritual *Bildungsroman*, the *Personal Narrative*.

This becomes thematized in the doctrines of Edwards’ metaphysics. In “The Mind,” Edwards shows that to perceive God’s “excellency” is to perceive the “complicated harmony” of the natural world as unified through an infinite series of similarities, of beings in essential “agreement” and “consent” (*WJE* 6:335). In Edwards’s theological lexicon, perception and excellency thus become ontologically bound. Excellency is not just a quality of a being, but “consists in the similarity of all beings to each other” (*WJE* 6:335); and, insofar as nothing can be excellent or in consent or relation on its own, Edwards posits a plurality of beings in essential, consensual harmony. Key to Edwards’ thinking, then, as Stephen H. Daniel writes in his essay “Edwards as Philosopher,” is his “relational ontology,” in which relations are intrinsic and “identity itself is based on the activity of differentiation and association” (Stein 164-165).32 This plurality of beings includes the perceiver, who thus experiences either the pleasure of feeling consent to what is perceived (and thus to being in general), or the pain of a “deformity” in what is perceived and thus its contrariety to being in general (*WJE* 6:335). In so doing, Edwards again turns to a psychological figure from Locke. Locke
had posited that things are good or evil only in relationship to pleasure and pain, even if
pleasure and pain, seemingly of the mind or of the body, are only “in truth” “different
Constitutions of the Mind” (Locke 137). Yet in Edwards’ hands, pleasure and pain
become ontological coordinates for the perception of relations:

Pleasedness in perceiving being always arises, either from a perception of
consent to being in general, or of consent to that being that perceives. As
we have shewn, that agreeableness to entity must be agreeable to
perceiving entity. It is as evident that it is necessary that agreeableness to
that being must be pleasing to it, if it perceives it; so that pleasedness does
not always arise from a perception of excellency in general; but the greater
a being is, and the more it has of entity, the more will consent to being in
general please it...And the more perfect created spirits are, the nearer do
they come to their creator in this regard (WJE 6:336-7).

In short, the source of the pleasure of seeing the natural world for Edwards is not just the
realization of the unification of the plurality of the world, the feeling of everything in
moral harmony; it is also one’s sense of pleasedness at participating in the fullness of
being. Or, in the alchemy of Borges’ language, it is Edwards’ bliss as he advances
through the shadows of trees of gold, reveling in the serene ambience in which “all things
hold Him in exaltation mysteriously, the gold of evening and the moon of gold.”

The experience of conversion to this end becomes a paradigmatic instance of
perception: the sanctifying process gives the individual new eyes and therefore new
means of negotiating the world of objects. As things exert their influence on the human
mind, the convert no longer feels given over to temptation or to covetousness, nor to the
terror of the thunderstorm rising – these would be “degenerate” object relations. Rather
the regenerate eye sees the “appearance of everything...altered.” God’s infinite
munificence shines through all phenomena; God’s “excellency,” Edwards writes, “seems
to appear in everything.” For Perry Miller, in his “intellectual biography” of Edwards,
regeneration thus becomes the point of intersection of the natural and the moral, such that the object is not cast away but becomes unified in a pious perception:

Regeneration is the convergence of the two orders upon a single perception, of the order of causes along with the order of morality, so that simultaneously there is given “union to a proper object – and a relish of the object.” Redemption is a flash of experience, forever abiding, in which natural good and moral good merge in a sense of the real good. Man must attain a complex response, and that it may be started, he needs a sense of the newness and freshness of the object for which he must entertain a relish (Miller JE 154).

Regenerate perception reveals a world brimming with the beauty of God’s glory. As Edwards will say in *A Treatise on Religious Affections*, the “minds of the saints” are marked by a “new inward perception or sensation of their minds, entirely different in its nature and kind, from anything that ever their minds were the subjects of before they were sanctified” (*WJE* 2:205). This “sensation of the mind,” as an inward seeing of the truth, comes to rhyme with Edwards’s famous formulation of a “sense of the heart” in his 1733 “A Divine and Supernatural Light” – a sense that goes beyond the rational to a feeling of the excellency of divine things.

So for Edwards, to be “brought back to life” in conversion, is to be brought to life in all its richness and relationality of phenomena. It is to be brought to the living world which we can experience and can come to know. The contention here is that, as a result, the place of the material world, if inferior in Edwards’s cosmological vision, remains of primary importance for understanding how he comes to theorize the immaterial. Only through an intense reckoning with the physical world can the metaphysical be ascertained. As Paul writes in Romans 1:20, “the invisible things of him since the creation of the world are clearly seen, being perceived through the things that are made.”
As we will see, this dictum will substantiate Edwards’ emphasis on natural science as means to better perceive God’s excellency at work in the physical world.

First we can note that, for this reason, Edwards articulates a typological theory of perception to interpret divine presence in the natural world. Edwards, that is, does not limit his typological practice to finding parallel passages from the Old and New Testaments. He opens typology as a means of perceiving all of nature, a practice manifest in his *Images of Divine Things*, an unfinished work consisting in a series of meditations on the spiritual significances of created things. There he writes, “[t]he Book of Scripture is the interpreter of the book of nature” because it both declares “those spiritual mysteries that are indeed signified or typified in the constitution of the natural world; and secondly, in actually making application of the signs and types in the book of nature as representatives of those spiritual mysteries in many instances” (*WJE* 11:106).

To know the intentional structure of God’s work in the world is to probe not just scripture, but natural phenomena for the marks of this intention:

The immense magnificence of the visible world, its inconceivable vastness, the incomprehensible height of the heavens, etc., is but a type of the infinite magnificence, height and glory of God’s work in the spiritual world: the most incomprehensible expression of his power, wisdom, holiness and love, in what is wrought and brought to pass in that world, and in the exceeding greatness of the moral and natural good, the light, knowledge, holiness and happiness which shall be communicated to it (*WJE* 11:129).

Yet for typology to be more expansive so to include all of nature in addition to scripture, it must also be more precise and more rigorous in its treatment of natural and divine correspondences. Perry Miller, who treats this issue in depth in his introduction to *Images of Divine Things*, therefore argues that the type-antitype relationship cannot be construed in the same way as the relationship between nature and trope. Nature is not
merely a *symbol* of God’s presence in the world (though of course Edwards does often draw on metaphors, like his infamously suspended spider in *Sinners in the Hands of an Angry God*), but nature must serve as direct presentation of truth of God’s presence in the world. The consequent amazement one might take in deciphering the types and antitypes of God’s revelation in the natural world is not meant as an indulgence of such wonders for wonder’s sake, nor of one’s fancy in the beauty of poetic tropes. That would be “sin,” as Miller condemns it. Rather, Puritan “plain style” sought for direct, unornamented communication: each phenomenon is not open to whatever associations a person might imagine, but is *necessarily* tied to divine truth or to divine intention (Miller 7-15). Through typology, Edwards can seek ultimate unity to nature and history in his theology: nature in its vast differentiation can be perceived as a unification, a unification not only of all coexistent matter and all perceptions of matter, but of what was, what is, and what will be as coeval in the divine mind. Each type in nature speaks to the harmony of God’s plan for the universe as it has so far unfolded. Each type arising from each instant of our perceiving and experiencing the world evidences our ongoing, moment-by-moment being-created. Each type is pregnant with revelatory potential – as each night’s sleep foreshadows our eternal sleep in death, each spring foreshadows the resurrection of the pious. “Today is tomorrow and yesterday.”

2. Shadows and bodies

This “shadowing” is formalized in Edwards’s philosophy in terms of the relationship between material and immaterial bodies. For Edwards, each material body is a shadow or “image” of a divine “more substantial” body. Edwards could be said to thus reverse the
usual coordinates of materiality – the spirit is no longer the ephemeral shade, but now the eternal solidity that casts the shadow on the world of transient phenomena. His conceptualization of the shadow here exhibits the mark of Cambridge Platonism on the structure of his metaphysics. In a late entry to “The Mind,” he cites Ralph Cudworth’s recapitulation of Plato’s allegory of the cave in the True Intellectual System of the Universe to this effect:

Plato [and] his subterranean Cave, so famously, and so elegantly described by him, [where he] supposes men tied with their backs towards the Light, placed at a great distance from them, so that they could not turn about their Heads to it neither, and there could see nothing but the shadows (of certain Substances behind them) projected from it, which shadows they concluded to be the only Substances and Realities, and when they hear the sounds made by those Bodies that were betwixt the Light and them, or their reverberated Echoes, they imputed them to those shadows which they saw. [I say,] all this is a Description of the State of the World, and to do all that is done in it and therefore often impute Sense, Reason and Understanding, to nothing but Blood and Brains in us (Cudworth 19; WJE 6:359).

Yet Edwards’ theological-philosophical extension of the divine shadow is not a mere recasting of the Neoplatonic idea, but becomes a key term in his relational ontology. As Edwards says in “Beauty of the World”:

The beauty of the world consists wholly of mutual consents, either within itself, or with the Supreme Being. As to the corporeal world, though there are many sorts of consents, yet the sweetest and most charming beauty of it is its resemblance of spiritual beauties. The reason is that spiritual beauties are infinitely the greatest, and bodies being but the shadows of beings, they must be so much the more charming as they shadow forth spiritual beauties. This beauty is peculiar to natural things, it surpassing the art of man (WJE 6:305).

In this formulation, we can note that human art is least among Edwards’ hierarchy of the beautiful, below spiritual beauty, and natural beauty. Yet Edwards’ more subtle point concerns the relationality of the body and the shadow. The sweetest consent, the body as
realized in the utmost fullness of its being-related, is in its being-related to spiritual beauties, “spiritual beauties are infinitely the greatest, and bodies being but the shadows of beings, they must be so much the more charming as they shadow forth spiritual beauties.” He makes his point explicitly in “The Mind”: “As nothing else has a proper being but spirits, and as bodies are but the shadow of being, there for the consent of bodies to one another, and the harmony among them, is but the shadow of excellency” (WJE 6:337). The work of the theologian, then, is both to read the types and to cultivate a mode of seeing in oneself and others which remains ever vigilant of God’s excellency, as it is in the manifold ways it becomes shadowed in the physical world. Yet Edwards’ types are both fixed and moveable: they are fixed in the eternal mind of God (there will be but one antitype) but, as incarnated in nature, as the signatures of all things yet to be read (there are many types), they remain open-ended and unfulfilled. Edwards thus replaces the Schein with the shadow: “the shadows are often repeated to show two things: viz. that the thing shadowed is not yet fulfilled; and second, to signify the great importance of the antitype, that we need to be so renewedly put in mind of it” (WJE 11:95).

Given the status of the objects of everyday experience as shadows of the divine, many readers of Edwards have undervalued the importance of the material world to his philosophy, stressing the metaphysical over the physical. Even Wallace E. Anderson, the editor of the volume of Edwards’ writings devoted to natural science and philosophy, understands Edwards’ philosophy in these terms: “The supposed correspondence of the mind and its modes of operation about objects, to the manner in which those objects actually exist, is a basic point in Edwards’ view that the physical world exists only as a
representation or ‘shadow’ of the spiritual” (WJE 6:93). There is substantial reason to do
so: indeed, *prima facie* the whole project of *Images of Divine Things* seems devoted to
how the physical gives itself away to the metaphysical. We wean ourselves from the
world as we become perfected by God’s grace, as a ripening fruit becomes weaned from
its nutritive source; the dung of our stinking bowels is shown to be typical of the filth of a
corrupted spirit. Along these lines, Edwards condemns, as corollary to his apology of the
universe as existing nowhere but in the divine mind in “Of Being,” the “gross mistake of
those who think material things the most substantial beings, and spirits more like a
shadow; whereas spirits only are properly substance” (WJE 6:206). Yet, to properly
orient these statements, we need to engage the problem of materiality as it appeared to
Edwards. This will, in the final analysis, show Edwards to be neither a mystical
theologian who works toward the annihilation of the physical, nor an immaterialist of the
kind that Berkeley is often labeled. The Edwards that will emerge might be better
characterized as a physicist of the metaphysical, if not equally a metaphysician of the
physical. His metaphysics of science underscores not only why he holds back from
mysticism and subjective idealism, but why he, at the same time, articulates his position
against materialism. The motto of Edwards’s phenomenal idealism might thus be: “To
the shadows themselves!”

For the young Edwards, that is, the shadow serves as a means to counterforce the
materialism of those like Hobbes who would make the “gross mistake” of thinking all the
universe to be corporeal, and thus occupied by bodies responsible for their own
movement. As Hobbes had said in *Leviathan* with characteristic pithiness, “every part
of the universe, is body, and that which is not body, is no part of the universe” (Hobbes
Accepting Hobbes’ materialist, mechanized, dynamic design of the universe seemed tantamount to Edwards to granting matter an existence or substance separate from the spiritual. It would dis-identify God from the world, and break up the necessary dualism that is the doctrinal base of natural theology. In an early notation in his “Miscellanies” he thus writes: “As we have shown and demonstrate (contrary to the opinion of Hobbes, that nothing is substance but matter) that no matter is substance but only God, who is a spirit” (WJE 13:166). Again, in No.26. of “Natural Philosophy,” he remarks “that instead of Hobbes’ notion that God is matter, that nothing that is matter can possibly be God, and that no matter is, in the most proper sense, matter” (WJE 6:235).

For Michael J. McClymond, in his article “Salvation as Divination: Jonathan Edwards, Gregory Palamas and the Theological Uses of Neo-Platonism,” this means that Edwards “sought to turn the tables on materialistic philosophy with his assertion that ‘spirit’ is substance and matter is merely a shadow in comparison. His idealism or immaterialism was an attempt to undermine the foundations of the materialistic and mechanistic philosophy” (Helm and Crisp 142).

Yet we must bear in mind that Hobbes does not deny the corporeality of the spiritual realm, in fact granting spirits an incorporeal substantiality which, despite fundamental differences, posited him close to others who critiqued the Cartesian notion that souls cannot be extended in space. (Platonist Henry More would, for example, develop a means of measuring spiritual amplitude in terms of its “spissitude” within a fourth spiritual dimension). In Hobbes’ An Answer to Bishop Bramhall, for example, in which he defends himself against the criticisms of atheism leveled by Bramhall in his “The Catching of the Leviathan,” he rejoins: “To his Lordship’s question here: What I
leave God to be? I answer, I leave him to be a most pure, simple invisible corporeal. By corporeal I mean a substance that has magnitude” (Hobbes xxvi). If Hobbes will travel too far by Edwards’s standards by asserting that God is material, at the same time, Hobbes’ materialism underscored the complexity of the material – it is cannot just be an either-or of materiality-immateriality, and thus Edwards is no more an immaterialist than he is a materialist. To be sure, Edwards will vehemently defend natural theology from the nullification of a divine intelligencer (which he perceived to be the implication of Hobbes’ materialism). He will work assiduously to show that the existence of bodies “depends immediately upon the divine Being, that bodies do not exist by themselves as substances at all” (WJE 6:59; 6:215); as we will see, Edwards’ notion of “resistance” will directly address this.

Yet Edwards’ encounter with Hobbes – even if it is spirit that is substance and the body that is shadow, even if the world exists in the mind, and finally, even if he will come to disclaim ever having read Hobbes later in life (despite his early citations of him) – showed him that the material would still need to be accounted for. Edwards’ extension of typology as a method for the perception of all of nature evidences this insofar as it necessitates that we investigate the intricacy of physical bodies in order to know the divine bodies of which they are the shadow. In turn, its complex semiotic (typological) method for interpreting divine presence in the natural world becomes a topology of true religious experience, a map to guide us in discerning the distinguishing marks of grace and spiritual conversion, even if they are to be found only at the margins of the visible, rational and affective. This becomes the task of his Religious Affections – to come to read the distinguishing marks of grace sown into the physical body. To know the
metaphysical, that is, one cannot deny the perception of materiality of bodies; but, as is the case in regenerate perception, it is to see bodies as they truly are.

If Hobbes helped Edwards clarify his position that the material is only to be understood through the immaterial, at the same time, Hobbes showed him (as did other post-Cartesians), the dangers of understanding spiritual things only through the terms of physicality. As Sharon Cameron writes in her essay “What Counts as Love: Jonathan Edwards’ True Virtue,” “[s]piritual things have features, but not physical features, have textures, but not the textures of objects, have pervasiveness without substance” (Cameron 36). Thus Edwards differentiates himself from contemporary debates concerning the spatiality of God. As Edwards will say, “that is a gross and unprofitable idea we have of God, as being something large and great as bodies are, and infinitely extended throughout immense space. For God is neither little nor great with that sort of greatness, even as the soul of man; it is not at all extended, no more than an idea, and is not present anywhere as bodies are present” (WJE 13:334). Thus when, in “The Mind,” Edwards meditates on the “place of minds” after Malebranche and with Locke’s Essay in hand, he at first seeks to decorporate the spiritual so to understand it on its own terms.

Our common way of conceiving what is spiritual is very gross and shadowy and corporeal, with dimensions and figure, etc.; though it be supposed to be very clear, so that we can see through it. If we would get a right notion of what is spiritual, we must think of thought or inclination or delight. How large is that thing in the mind which they call thought? Is love square or round? Is the surface of hatred rough or smooth? Is joy an inch, or a foot in diameter? These are spiritual things. And should we form such a ridiculous idea of spirits, as to think them so long, so thick, so wide, or to think there is a necessity of their being square or round or some other certain figure? (WJE 6:338).
For Edwards, these questions of spissitude consist in misplaced concretions and should be dispensed with like such pedantic, Scholastic questions as the infamous “How many angels can stand on the head of a pin?” Edwards strives to displace the material-immaterial relationship from an understanding that ties spirits (and God, if differently) to the limits of space as humans can comprehend it, thus asserting himself against Descartes, Hobbes, and More.

But, Edwards allows, even if the features of spiritual things are not those of physical things, and even if the limits of the physical world should not inhibit the motion of spirits, spirits still stand in relation to bodies, positionally or dis-positionally, as in the paradigmatic case of the soul’s union with the body. In these cases, such spiritual things demand a rigorous investigation into the motion and place of the spirit in relationship to the body, to the mind, and to the things of the physical world, which his typology of shadows sought to realize. As Edwards continues, still under the heading “Place of Minds”:

In spirits united to bodies, the spirit more strongly perceives things where the body is, and can there immediately produce effects, and in this sense the soul can be said to be in the same place as the body is; and this law is that we call the union between soul and body. So the soul may be said to be in the brain because ideas that come by the body immediately ensue only on alterations made there, and the soul most immediately produces effects nowhere else. No doubt that all finite spirits, united to bodies or not, are thus in place; that is, that they perceive or passively receive ideas only or chiefly of created things that are in some particular place at a given time. At least a finite spirit cannot thus be in all places at time equally. And doubtless the change of the place where they perceive most strongly, and produce effects immediately, is regular and successive; which is the motion of spirits (6:338-339).

The motion of spirits thus holds real consequences for the physical world. The union of the soul and body causes an immediate effect on the body. Likewise, the mind is “so
united with the body that an alteration is caused in the body, it is probable, by every action of the mind. By those acts that are very vigorous, a great alteration is sensible” (WJE 6:339). In cases of disease, Edwards notes, which impairs the vigor of the body, or renders it docile to the effects of the mind, “almost every” mental action alters the body (WJE 6:339). Thus the metaphysician becomes a reader of the physical (or psychosomatic) symptoms of the divine at work in the physical.

Edwards found means for resolving problems of materiality in the idea of perception made available to him by Locke’s empirical picture of the mind. The intermediary of the idea made it possible for Edwards to maintain an idealism that does not do away with the material, brought to us in part by sense experience, but rather takes it as its source. Or, as Miller quips, “[h]is so-called idealism was a stratagem, not to deny objective existence, but to affirm it” (JE 62). In a subsequent passage from “The Mind,” again full of the potential he found in the Lockean terminology, he directly addresses the possible misunderstanding that his idealism would void the material. In so doing, he not only further locates the place of the mind in his theological topology but, essential to our purpose here, he defends the place of natural philosophy in his idealism:

When we say that the world, i.e., the material universe, exists nowhere but in the mind, we have got to such a degree of strictness and abstraction that we must be exceedingly careful that we do not confound and lose ourselves by misapprehension. That is impossible, that it should be meant that all the world is contained in the narrow compass of a few inches of space, in little ideas in the place of the brain; for that would be a contradiction. For we are to remember that the human body and the brain itself exist only mentally, in the same sense that other things do. And so that which we call place is an idea too. Therefore things that are truly in those places, for what we mean when we say so is only that this mode of our idea of place appertains to such an idea. We should not, therefore, be understood to deny that things are where they seem to be, for the principles we lay down, if they are narrowly looked into, do not infer that. Nor will it be found that they at all make void natural philosophy, or the
Here, Edwards works to clarify both the place of the physical world in his idealism and the place of the mind in his natural philosophy. When he states that “the material universe exists nowhere but in the mind” his claim is that he is not refusing an actual physical existence or position to the material universe. He dismisses via a *reductio ad absurdum* any naïve reading of his idealism that would conceive of the world as being contained in the “narrow compass of a few inches of space, in little ideas in the place of the brain.” Even if he will elsewhere in “The Mind” ascribe a place to thought – i.e. in the “bodies of men, or at least in some parts of them” (*WJE* 6:348), here he reminds us that the human body and the brain, like all things, exist only mentally as ideas. At the same time, as Locke had written, “we are furnished with faculties (dull and weak as they are) to discover in the creatures to lead us to the knowledge of the Creator and the knowledge of our duty” (Locke 185). Edwards is thus careful to say that one who will closely interpret his idealism should not infer that he will “deny that things are where they seem to be.” Such an “idealism” would not only ignore the fundamental innovation of Locke, also it would “void natural philosophy.” It would render physics, the “sciences of the causes or reasons of corporeal changes,” useless toward determining how God makes manifest his will in the world. Edwards thus clearly states the place of science in his program of thought: “to find out the reasons of things in natural philosophy is only to find out the proportion of God’s acting.”

Natural philosophy, for Edwards, then, opens the possibility of our renewed relationship to the object-world; it gives us clearer eyes to see, and more refined
understandings of that which we find before us, of things where they seem to be.

Scientific enquiry enables the detailed, exact seeing necessary to truly perceive God’s excellency, “the proportion of his acting.” In turn, Edwards’ science becomes poised at the threshold between the physical and metaphysical, visible and invisible, where shadow becomes light, and light shadow. To articulate his theological position, then, Edwards will draw on and at times fundamentally reconfigure the terms of his contemporary natural philosophy. It is his natural philosophy that will grant him his unique position in the intellectual history of the eighteenth-century, apart from his contemporary theologians like Chauncey and Whitefield and even from the theologian-scientist Cotton Mather. His path to perceive and come to intimately know physical bodies will follow, and come to diverge from, the path of the empiricism of Locke and the mathematical physics of Newton, the occasionalism of Malebranche and the neo-Platonism of Henry More; it will strike a winding middle path between the idealism of Berkeley and the materialism of Hobbes, the strictly ordered harmony of the Leibnizian universe and the thinking of liberty and necessity of Hume. So to better understand what is at stake for materiality and perception in Edwards’ thought we should now consider the place of science within it in greater depth. Perhaps we will find that the forest through which Borges shows Edwards to advance, and the forest from which Edwards emerges ecstatic, is not just a forest of shadows but a forest of material bodies made known to us by science – a forest of bodies that are perceived, and themselves perceive.
3. Science at the threshold of the visible

Considerations of Edwards’ natural philosophy have mostly focused on his texts that ostensibly deal with scientific topics. These are, namely, “Of Insects,” the “Spider Letter,” “Of the Rainbow,” “Of Light,” and his series of notes called “Natural Philosophy” and “Things to be Considered and Written Fully about.” These texts evidence Edwards’ deep commitment to the event of thought that had shaken the foundations of Western science, Newton’s publication of his *Philosophiae Naturalis Principia Mathematica* in 1687. Even if it was the “Queries” at the end of Newton’s *Opticks* (1704) that most directly affected Edwards’ metaphysics, he was thoroughly imbricated in the picture of the universe formulated in the *Principia*. Even in what could be construed to be his “biological” writings, Edwards’ focus rests mainly on problems of Newtonian optics and physics – on the trajectory the spider follows while flying rather than on the anatomical means of flight, or on the perceptibility of the spider web as light rays played upon it, deploying Newton’s notion of “incurvation” (*inflexio*) to explain the paradox that one can see the filament of the web better from far away than from up close.41 In these texts Edwards positions himself not only with and against Newton, but among the milieu of scientists who have come to define the age of Enlightenment, offering a variety of his own theoretical reasons for the existence of phenomena as they appear. Among the manifold meditations in his “Things to be Considered” series, he remarks on the behavior of the sun, moon, planets and comets, the earth’s atmosphere, the movement of clouds, ice, elasticity, sound, gravity, etc. “Streams of lightning,” as Edwards relates in one remarkable entry (and one that begs comparison with a later American expositor of electricity), “are not caused by any solid burning red hot mass of
matter, exploding with such swiftness as to cause it to appear as if there were one
continued stream of light” (**WJE** 6:287). Rather, he surmises,

lighting seems to be this: a parcel of almost infinitely fine combustible
matter, that floats in the air, that takes fire by a sudden and mighty
fermentation, that is someway promoted by the cool moisture and perhaps
attraction of the clouds. By this sudden agitation this fine matter is driven
forth with a might force one way or another, which way it is directed by
the circumstances and temperature of the circumjacent air (**WJE** 6:287-
288).

Further, as we have already begun to see, it is not only Edwards’ straightforward
scientific treatises that bear the imprint of science. Metaphysical works such as “The
Mind” or “Of Being” are structured by an implicit physics of bodies and relationships; his
typology/topology of these bodies become shadowed in *Images of Divine Things* and
“The Beauty of the World”; his sermon “A Divine and Supernatural Light” extends the
thought of Newton and Locke to show how divine light, different from natural light,
shines in upon the mind and heart; later treatises *Original Sin* and *The Nature of True
Virtue* draw on his physical picture of the universe to theorize natural tendency, affection,
will, freedom and necessity; series after series of notes and “Miscellanies ” compiled
throughout his lifetime are devoted to the relationship of religion and science. Each of
these texts evidence that from beginning to end, Edwards was profoundly both a physicist
of metaphysics and a metaphysical physicist.

Before we explore the implications of Edwards’ science on his thinking of
materiality and perception, however, it is instructive to add a few words of context. That
natural science and philosophy become central to Edwards’ detection in the physical
world of the immanence of divine power and creativity was not without precedent in
early America. Cotton Mather’s scientific work, for example, is likewise marked by a
careful appropriation of elements from his contemporary European natural science. In even more emphatic terms than Edwards, Mather will declare Newton to be the “Perpetual Dictator of the learned World” (65). As we noted in the Introduction, in his compendium, *The Christian Philosopher*, Mather illustrates Calvinist religious dogma with not only Newtonian physics, but also Leeuwenhoekian microscopy and a wealth of other scientific work by prominent European thinkers (such as John Ray, William Derham (who accordingly produced an *Astro-theology* (1713) and *Physico-Theology* (1715)), John Harris, Andreas Vesalius, Adriaan van der Spiegel, Descartes, Cheyne, Clarke, Halley, etc.). With enthusiasm always on the verge of zealotry, he announces the place of all the celestial and terrestrial phenomena then known to science on his Christianized *scala natura*:

> There is a *Scale of Nature*, wherein we pass regularly and proportionally from a *Stone* to a *Man*, the Faculties of the Creatures in their *various Classes* growing still brighter and brighter, and more capacious, till we arrive to those noble ones which are found in the *Soul* of MAN; and yet MAN is, as one well expresses it (Mather 306).

He notes with especial excitement, then, as human “imbodied intellect” trajects upwards into the invisible, supernatural “perfect mind.”

In general terms, Mather, like his fellow Puritans and the European apologetics (such as Ray) who served as his correspondents, directed his scientific work towards the service of the singular purpose of advancing the faith. Science became a cartography or taxonomy of the manifold presence of the divine in nature, drawn across the bodily, terrestrial, mental, lexical, and spiritual sites of the Puritan hermeneutic. The “relocation” of Enlightenment natural science into New England Calvinist theology, at certain points, led Mather to resist the European natural scientific and philosophical
community. First-hand knowledge of New World phenomena enabled Mather to challenge the empirical bases and fundamental prejudices of European natural philosophers, taxonomists, and geographers who asserted the inferiority of American species as contrasted to their Old World counterparts (in a manner that later Franklin and Jefferson would repeat). At the same time, the sovereign boundaries of the American colonies became the boundaries of the known world; imperial and empirical frontiers merged at the dark threshold of the wilderness of unknowledge.

Yet scientists on both sides of the Atlantic well knew that revelation was not only located in terms of the grand differences of continental geography. The whole endeavor of natural theology, European and American, was to read in each phenomenon the subtle, even imperceptible, signs of how all nature fit a predetermined grid according to God’s plan. In line with the optical emphasis of much of Enlightenment science, then, much of the science of Mather and Edwards, if not most of Puritan science, inhabits the threshold of the visible and the invisible, in the molecular inter-space where divine providence quietly labors, or at the limits of outer space, as far as the gaze towards the infinite might extend. The microscope merely made it easier to see God working through nature’s leasts; the telescope, after the Church’s initial resistance, came to provide even more evidence of God’s immense grandeur. The formula *tota in minimis existit natura* in the hands of natural theologians translated into yet another formula for God’s wondrous immanence. As Mather concludes:

> The green scum on the surface of stagnating waters, which is nothing but prodigious numbers of animalcules; how come they there?…A *Drop of Water* is a sort of *Ocean* to them! Mr. Derham in a *Drop of the green Scum* upon Water, a *Drop* no bigger than a *Pin’s-head, sees* no fewer than a hundred frisking about. How vastly many more in a *Drop of Pepper-
water! How vastly many, many, many more, in a Drop of the Leuenhoeckian Examination!…Great GOD, we are amazed! (160-161).

The wondrous eye itself was not only an instrument for seeing God’s grace, but itself incontrovertible evidence of this grace. “No Man who surveyed the Eye” as Mather exclaimed, “could abandon himself to any speculative Atheism” (260). Edwards will likewise see “the wisdom of God in the contrivance of the eye”: in his short text, appropriately titled the “Wisdom and Contrivance of the World,” he celebrates the wondrous eye above all other sensory organs as that which can “so minutely” distinguish the “form of objects,” and that can so exactly and instantaneously perceive the manifold minimal differences of sensual impression, at a speed faster than the mind can comprehend them (WJE 6:308). But the eyebeam, despite the natural sensitivity of the retina, and despite the prosthesis of magnification, could only carry these “enquirers of the world” so far. Mather rather would seek to ascend the scala into the other ontological realm: “We are now soaring into the invisible World, a World of intellectual Beings, but invisible to such Eyes as ours” (306). Edwards, as we have already adumbrated, will restate the immaterial-material threshold in terms of the ontology of divine shadows.

At the threshold of the visible, that is, neither Mather’s nor Edwards’ science would merely pass into the dark of irrational faith. Mather, for his part, instead adopted a “corpusclean” theory of matter: in his chapter of the Christian Philosopher, “Of the Cold,” for example, he postulates that “To some there seems to be a mighty store of Corpuscles, a little a-kin to Nitre, exhaled from the terrestrial Globe, (of the Figure which Philoponus tells us. Democritus assigned to Frigorifick Atoms) which may more than a little contribute to our Cold” (80). For Mather it is the “irresistible Force of Congelation,” by which these “frigorifick atoms” join, i.e. as freezing water expands into
tracts of ice. He puts this in Newtonian terms of attraction, cohesion, and force:

“Congelation seems to be from Introduction of the Frigorifick Particles, into the Interstices between the Particles of the Water and thereby getting so near to them, as to be just within the Sphere of the one another’s attracting Force, on which they cohere into one solid Body” (80-81). He offers a detailed collation of current scientific thought on gravity, as well, carefully extracting passages from Newton’s theologically-minded expositors, such as Edmond Halley, George Cheyne, and Samuel Clarke (Solberg 392).

From Cheyne, Mather comes to his central statement on gravity:

That Gravity, or the Attraction of Bodies towards one another, cannot be mechanically accounted for. The Planets themselves cannot continue their Motion in their Orbs without it. It is not a Result from the Nature of Matter, because the Efficacy of Matter is communicated by immediate Contact, and it can by no means act at a distance. Whereas this Power of Gravitation acts at all Distances, without any Medium or Instrument for the Conveyance of it, and passes as far as the Limits of the Universe. Matter is indeed entirely passive, and can’t either tend or draw, with regard unto other Bodies, no more than it can move itself (92).

By following Newton’s advocates, Mather stays close to the Newtonian position. He finds that gravity “does equally affect all Bodies” and is thus absolute (92). Yet, as could be expected, it is clear from each of Mather’s conclusions in these sections and throughout The Christian Philosopher that his agenda is not scientific, but theological. His use of Newtonian science serves more as an illustration of his dogma than is essential to it. He opposes the mechanical theory of matter and gravity because it would replace the immediate and continuous action of God with a notion of self-government. That is, he does not reject per se the metaphor of the machine, but only its method of operation. With typical brazenness, he thus labels the terms of theories of self-government (specifically, the Platonic “anima mundi,” Aristotelian “substantial form,” what he calls
“plastick Virtue” or plasticity, as well as More’s notion of a “hylarachic principle”) as “mere allegorical Terms, coined on purpose to conceal the ignorance of their Authors” (94-95). It is only God himself who has all the “springs of this immense machine, and all the several Parts of it, in his own Hand” (95). God is primary, secondary and every subsequent cause; he is “the first Mover; but that without his continual Influence the whole Movement would soon fall to pieces” (95). “Yet besides this,” Mather adds as a final aside that would have probably chafed the Newtonians that he repeated, “He has reserved to Himself the power of dispensing with these Laws, whenever He pleases” (95).

In sum, however, Mather does less to challenge the Newtonian position than to exaggerate its theological leanings to support his Calvinism.

Edwards, as we have seen, also vehemently resists the nullification of divine providence implied by the mechanistic account of the universe, keeping Hobbes at bay and Newton in close proximity. Yet the problems of materiality that Mather engages are not just illustrative of his dogma, but also they fundamentally drive Edwards’ theological philosophy. Even if Edwards was not mathematically adept enough to see the intricacies of Newton’s theory (nor was Mather for that matter), Newton’s physics comes to inhabit the whole of his oeuvre, indelibly marking the metaphysical structure of his thought in a way that cuts far deeper than it would for Mather. The myriad instances of light diffused throughout Edwards’ writing alone evidence this pervasiveness. Joan Richardson, in A Natural History of Pragmatism, expansively treats these diffusions of light. For Richardson:

Newton’s experiments led [Edwards] to theorize that while light was omnipresent, its manifestations ranged through the colors of the humanly perceived spectrum and into darkness…these manifestations were to be imagined as products of relations between the invisible, pure light of the
sun and the myriad elements with which it interacts…Understood as the most immensely complex relation of degrees of interactivity on a spectrum extending to the infinite, scintillant degree of God, light, as described by Newton, actualized each and every element of God’s creation (44-45).

Richardson details how Edwards understands divine light through the terms of Newtonian science, yet in so doing does not “naturalize” or “diminish” the supernatural. Light, is not just metaphorical, but takes on the status of an “actual idea” (WJE 6:356), a materiality that has affective resonance in the feeling/thinking soul. The soul, striving for redemption, will literally “thirst for light,” to “drink in the light of the sun” (WJE 10:466), or be nourished by light like an unfolding flower. Light becomes heat: the heat of light rays diffracted and absorbed, the heat of the fire set by the minister’s speech that rises to consume the heart, the scintillating “spiritual light” that Edwards will describe in “A Divine and Supernatural Light” as giving “due apprehension of those things that are taught in the Word of God”(WJE 17:412). Moreover, Newton had provided Edwards with a figure for developing his typology of shadows: Newton, by rejecting Huygens’ wave theory of light, proposed instead a corpuscular theory in which the rectilinear motion of the light corpuscles became obstructed by solid objects (Whitehead 47). Even given the dis-positioning of the materiality to the divine body, Edwards could maintain the Newtonian structure of light, the iridescent divine light intensifying the shadows it cast across the phenomenal world.

Yet it was Newton’s articulation of matter that was most pressing for Edwards, opening questions that exceeded the spectrum of the visible (or perhaps stood imperceptibly at is base). Like Newton, and if in more refined (and less colorful) terms than Mather, Edwards espouses a theoretical atomism at the base of his science. As Edwards writes:
God, in the beginning, created such a certain number of Atoms, of such a
determinate bulk and figure, which they yet maintain and always will, and
gave them such a motion, of such a degree of velocity; from whence arise
all the Natural changes in the Universe, forever, in a continued series
(WJE 6:353).

Anderson, in his introduction to Edwards’ scientific writings further summarizes
Edwards’ atomism:

The theory of nature upon which Edwards depends in most of his
scientific demonstrations is the theory of atomism. All bodies are
composed of indivisible, solid particles of a homogeneous matter; they
have various sizes and shapes, and various positions and motions in the
void of empty space; and they combine, separate, collide, and rebound,
and otherwise interact according to fixed universal laws. The gross bodies
of the world, their properties, and all the observable phenomena in the
physical universe are thus determined by this system of atoms (WJE 6:45).

As Newtonian science had also made explicit, the universe was not just a mechanical
ensemble of atoms in endless collision and ricochet, but was shaped by forces of
attraction and repulsion such as gravity. Yet despite its universal nature, gravity is a
weak force and cannot account for the cohesiveness of all the atoms – and certainly could
not act across great cosmic distances. Newton famously rejected the idea of “action at a
distance.” In his 1693 letter to Richard Bentley, he writes in adamant terms:

It is inconceivable that inanimate brute matter should, without mediation
of something else which is not material, operate upon and affect other
matter without mutual contact…That gravity should be innate, inherent
and essential to matter, so that one body may act upon another at a
distance through a vacuum without the mediation of anything else, by and
through which their action and force may be conveyed from one to
another, is to me so great an absurdity, that I believe no man who has in
philosophical matters a competent faculty of thinking can fall into it
(Newton 102).

Newton, that is, because he lacked an empirical basis to theorize this coherence, had to
disclaim both that matter is inherently held together by gravity (that gravity, i.e., is
essential to matter) and that bodies could exert their influence across space without
actually coming into contact. Newton would later postulate a universal fluid, or ether, that would cohere all matter and explain local intensifications of gravitational force, as towards the center of the earth. But this in the final analysis likewise was impossible to prove; Newton held fast to his motto “hypotheses non fingo.” Newton thus would not assign a scientific cause to gravity, even if his expositors (and himself, implicitly) would adduce divine power as primary and subsequent causes. Mather was nonetheless content to accept a mechanical picture of the universe with God as its operator, replete with a notion of gravity that, consonant with God’s omnipresence, could hold everything together. He did not concern himself with the fact that Newton was left suspended between an assertion that either God is the cause of gravity, or an admission that there is a mechanical cause for gravity (such as a vast centripetal force that drew all bodies to the center of the universe or an universal ether). For Mather, quite clearly God was the cause of all things including gravity; God was the glue that kept it all together.

Where Mather had postulated a divine, “catholick” force that acts on, in, and across all matter so to bind all matter at every moment by the will of the “glorious GOD,” so too would Edwards show that every step of every walk we take is in step with God, and supported by God’s guiding hand. Like Mather, Edwards states in “Of Atoms,” “all body is nothing but what immediately results from the exercise of divine power in such a particular manner” (*WJE* 6:215); which he then restates emphasizing the material: “resistance or solidity are by the immediate exercise of divine power…there is no proper substance but God himself…How truly, then, is he said to be *ens entium*” (*WJE* 6:215). In terms transcribed from the Newtonian script, Edwards describes how the movement of a body successively from one part of space to the next relies on the “communication of
that resistance, according to the laws of motion” (WJE 6:216). As sub-stance, God supports the world; as resistance, at each point in time or space he holds all solidities together. God’s creativity is realized in this constant act of resistance: as Edwards writes in “Natural Philosophy,” “the universe is created out of nothing every moment” (WJE 6:241), a statement which has led many scholars to collapse Edwards’ view of God’s relation to the world into a Malebranchean occasionalism. This constant act of resistance will be a central thought for Edwards: it is in this way that he understands how natural forms “become” and are, due to the temporality of their becoming, inherently plural. As Edwards will state in his late text Original Sin:

God’s preserving creating things in being is perfectly equivalent to a continued creation, or to his creating those things out of notion at each moment of their existence. If the continued existence of created things be wholly dependent on God’s preservation, then those things would drop into nothing, upon the ceasing of the present moment, without a new exertion of the divine power to cause them to exist in the following moment (WJE 3:401).

For Edwards, this is the rhythm of the course of nature, a rhythm borne out in a number of beautiful passages in Original Sin: “A father, according to the course of nature, begets a child; an oak, according to the course of nature, produces an acorn, or a bud; so according to the course of nature, the former existence of the trunk of the tree is followed by its new or present existence (WJE 3:401). In another, Edwards considers the “moon’s past existence” to be ineffectual in creating its present state, again evidencing that “the existence of created substances, in each successive moment, must be the effect of the immediate agency, will, and power of God” (WJE 3:400). Or, in the apocalyptic mood of Sinners in the Hands of an Angry God, Edwards reminds those sinners like ourselves, swinging over the burning abyss by a “slender thread,” that we had better be thankful for
the moment-by-moment exertion of the God that upholds us, sparing us by his hands
from the “great furnace of wrath” (WJE 10:145).

In theorizing this resistance, however, Edwards is not content to rest where
Newton’s understanding of matter came to rest: namely, at the level of inter-atomic
forces of cohesion, attraction, and gravity. In his “Things to be Considered,” Edwards
boldly stated the very thought Newton deemed absurd: “Solidity is gravity; so that in
some sense, the essence of bodies is gravity…the bare being of a body, without
supposing harmonious being, necessarily infers gravity” (WJE 6:234). On this basis,
Edwards plans in a later text:

to observe that folly of seeking for a mechanical cause of gravity; but to
observe that this has as much a mechanical cause as anything in the world,
and is as philosophically to be solved, and ought no more to be attributed
to the immediate operation of God than anything else, which indeed arises
from it; and gravity is in no way diverse from a principle by which matter
acts on matter (WJE 6:234).

Although he would never complete the natural historical treatise for which these notes
were taken down, in a later entry in “the Mind” on “Substance,” Edwards repeats the
everal pronouncement: “Gravity by all will be confessed to be immediately from some
active influence” (WJE 6:377). What this means is that God is immanent in, and
immediate to, matter: “we may infallibly conclude that the very being, and the manner of
being, and the whole of bodies depends immediately on the divine power” (WJE 6:235).

In turn, insofar as atoms are in motion and thus are temporal – “every object is a
continuing event” – divine intelligence is immanent to the series of these events, and is
therefore not an external mechanical cause as Newton had postulated, but a divine
causality that arises from matter itself. As Edwards writes in “Of Atoms”: “The
existence and motion of every Atom, has influence, more or less, on the motion of every
other body in the Universe”; for Edwards, this evidences God’s infinite, intimate power in shaping the temporal and physical order of the world, even in its most minute relations. Atoms thus don’t take wrong turns in the sense of a Lucretian *clinamen* – this would compromise the omniscient force of God who directs every least thing that happens in the universe; it would subvert the “strict rules of justice and harmony” he has set (*WJE* 6:231).47

Edwards does not then conclude like Mather that natural laws could be discarded at any point by an all-powerful but capricious God. Rather he suggests that natural laws are inviolable because they vibrate in harmony with the universal order, the order that God mandates according to his will. God is not all-powerful because he can change or break laws as he pleases, but because he has perfectly crafted and infinitely enforces the laws as they are. The very persistent activity of God becomes the law itself.48 In “The Mind,” for example, Edwards therefore concludes that in gravity and motion, “God causes a centrifugal force in that body that can be supposed to move circularly, consistently with the laws of motion” (*WJE* 6:383). This idea of the divine legislation of nature is dependent upon Edwards’ notion of all matter as resistance – the equal and opposite reaction of all material accords with God’s “legal” contract with the world. As Miller summarizes: “the corporeal universe results from concentrations of resistance at various centers of space, which have a power of communicating, through gravity and collision, from one point to another, according to stated conditions which infinite wisdom perpetually observes. In such a cosmos there is no such thing as mechanism…but there is perpetual determination of sequences of events” (Miller *JE* 92). Or, as Daniel writes, “God is the substance of all bodies precisely because he is the will that there be a stable
order of communicated resistance. In willing the resistance (that is, identification) of any body, God simultaneously wills the whole network of bodies in the world” (Stein 167).\(^{49}\) (For Daniel, we can note in passing, it is not the lawfulness of resistance that separates Edwards from Malebranche (who himself showed God to abide by his own laws), but this relational ontology of “differentiation and association,” the stable, yet plural order of communicated resistance).\(^{50}\) Through his articulation of natural law, then, we can see the topological congruence of Edwards’ physics and metaphysics: “It is laws that constitute all permanent being in created things, both corporeal and spiritual” (\(WJE\) 6:391). Thus it is the laws that are eternal: each expression of the natural law evidences God’s intimate presence in every element of the material universe. Across the network of his ordered cosmos, God guides each atom through its spatial and temporal positions. God is active in every particle and network of particles, immanent to the order of the universe.\(^{51}\)

4. The Natural History of the Mental World

For Edwards, the universe is nonetheless not structured according to a divine intelligence which is closed off to human understanding; this intelligence is “communicated” to humanity. God, in other words, is continually communicating his wisdom to humanity through the material world in terms of his ongoing interaction with and “intimate involvement in every detail of existence” (Stein 168). Again, it is through his rarefied typological method (epitomized in regenerate perception) that this communication takes place. That is, it is not via imagination that the natural world makes itself known to us (imagination “hinders” us, Edwards warns (\(WJE\) 6:241-242)), but through clarified perception. This again stresses the importance of the actuality of the material world. To
perceive things as they are – as God created them – is not to symbolically associate them with that which is extrinsic to them, but to look more deeply into this materiality for their theological significance. For Perry Miller, it is Edwards’ combination of this understanding of materiality rendered through his strict typology of nature that differentiates him. It marks his distance from Mather, who was “unaware of either the scientific or moral hazards he ran in using natural images to decorate a doctrine” and thus “was still living, despite his reading of Newton, in the mental world of Calvin” (“Images” 28). More generally, Edwards’ “extension of typology, reinterpreted by the new science and psychology,” Miller asserts, was the “innovation in New England Puritanism, in Protestantism, because he proposed to mold the mind into the closest possible relation with natural objects, as a glove upon a hand” (28). And Miller advances his point even further: “but in that very proposal was implied a still more radical break with the past: an exaltation of nature to a level of authority coequal with revelation – nature as seen by the regenerate eye, but still nature, the nature of the Principia” (28). Thus Edwards, in a way that neither Mather nor his contemporaries could have articulated, showed that not only did typology demand a science, but that science demanded a typology. Science, left to its own devices, would resolve into the mechanical picture of the universe, voiding the intimate presence of the creator in every atomic movement. “[S]cience as mere description of phenomena” could not “take place of philosophy or theology” (29). Again this puts into relief Edwards’ rejection of Hobbes’ materialism: all the bodies of the world are not themselves responsible for their own movement, but are activated by God’s presence and thus typical of this presence.
Although Edwards and Newton share much in their scientific and theological pictures, the differences between them not only concerns the inherence or non-inherence of gravity in matter. They concern how God communicates this materiality to humankind. Put differently, if Edwards could not so easily paper over the cracks he saw to be coursing through the façade of Newtonian science, he would attempt, from out of these cracks, to show God’s beneficence and wisdom bursting forth. This is his faith that the plurality of perceptions co-present in the divine mind orders and coheres the universe.

As we noticed at the outset, Edwards shows in “The Mind” that to perceive God’s “excellency” is to perceive the “complicated harmony” of the natural world as unified through an infinite series of similarities, of beings in essential “agreement” and “consent.” The perceiver is directly, ontologically implicated in this order. “Any moral or aesthetic harmony that we perceive in the world is thus not accidental, for our perception of nature itself is part of its inherent, divinely established intricacy and order” (Stein 164). Yet this intricacy is not always immediately or easily perceivable, if perceivable at all. Thus science, both Mather and Edwards make clear, worked as a means of traveling past the veil of the apparent world, so to see ever deeper into God’s immanent presence in things. The atom (and even as the indivisible unit of matter it could by Edwards’ terms be conceivably as large as the largest sphere imaginable), unlike the sun, moon, and stars, the grass, flowers, and trees or the thunder and the lighting, was not directly or experientially knowable. As Miller points out (and not without a little sarcasm for those who would separate science from religion on the basis that it doesn’t rely on belief), not Newton nor anyone else could at this time “see” an atom; it existed fundamentally as a concept, a concept that would have to be taken on faith.53
differently, as Edwards realized with Locke’s help, the problem of the cohesion of atoms was a problem of the “cohesion of thought.” As Miller concludes, “the cohesion of thought makes possible both the idea of the atom and of bodies made of atoms joined together” (Miller JE 92). The universe of atoms was a universe of concepts, and could only be unified in terms of a conceptual unity. In this as well, Edwards’ phenomenal idealism pushed him far past Mather’s comfortable method of ordering the wonders of the world by analogy and resemblance. Edwards does not place reality as either a function of the Aristotelian system of classification or in terms of a scholastic technologia, but systematizes nature as a stable series of ideas and perceptions. The unity of ideas for Edwards will go to the heart of his definition of knowledge, in a way that departs from the Lockean terminology of agreement and disagreement: “Knowledge is not the perception of the agreement or disagreement of ideas, but rather the perception of the union or disunion of ideas, or the perceiving whether two or more ideas belong to one another” (WJE 6: 385).

The ideal conceptual unity of all things does not compromise their material existence, but rather clarifies their existence as implicated in an infinite complex of relationships – namely “all the natural changes in the universe in a continued series” – which exists only perfectly in the divine mind (WJE 6:354). As Edwards explains in “The Mind”:

[I]f it be inquired what exists in the divine mind and how these beings exist there, I answer: there is his determination, his care and his design that ideas be united forever, just so and in such a manner as is agreeable to such a series. For instance, all the ideas that ever were or ever shall be to all eternity, in any created mind, are answerable to the existence of such a peculiar atom in the beginning of creation, of such a determinate figure and size, and have such a motion given it (WJE 6:354).
This does not only bear on atoms, but on “creatures” as well: “all ideal changes of creatures are just so…according to the nature of other matter that is actually perceived by the mind” (WJE 6:354). Throughout Edwards’ elaborate metaphysic, he places primary importance on perception for participating in the order of the universe. For Edwards, “all existence is perception. What we call body is nothing but a peculiar mode of perception; and what we call spirit is nothing but a composition and series of perceptions, or an universe of coexisting and successive perceptions” (WJE 6:398). Perception, as it follows the dispersion of all natural phenomena, seeks both to understand each phenomenon in its individuality (in its identity and difference) and to see it as implicated in its mutual relations. This does not mean that he denies the “reality” of natural physical bodies: for there to be identity at all in Edwards’ system, perception needs to be the perception of differences, as Daniel writes, “[because a being is possible only in virtue of its differential place in a network of actually perceived relations, it has no merely possible existence. Rather its actual existence depends on its being supposed as a feature of the order of things, even if it is not perceived by any created mind” (Stein 168). Through perception we can see how the natural world both differentiates and belongs together in the unity of the divine mind. Every perception is the perception of that thing in relation to not only all other things, but to all other perceptions, to “the whole system and series of ideas in all created minds.”

Moreover, the ideal conceptual unity of all things relies on nature insofar as particular things “naturally excite” one another: “God has not only distributed things into species by evidently manifesting, by his making such an agreement in things, that he defines such and such particulars to be together in the mind, but by making the soul of
such a nature that those particulars which he thus made to agree are unavoidably together in the mind, one naturally exciting and including the others” (WJE 6:362). The order of nature, that is, arises from how God mutually “excites” things so to draw them together in ideal unity in the mind. Thus it is not just that the order of the natural world evidences God’s perfection, but that God’s perfection evidences the natural world. The fact that every idea exists in a stable unity in the divine mind, for Edwards, necessitates that things naturally cohere in the physical world. (In this sense, we could say that it is not God that causes us to raise our hand in an act of the will, but supports its every gesture by perfecting the structure of the arm so that its muscles, tendons, and bones, etc., can perform in perfect coordination).

God not only naturally excites things into the unity of ideas, but also his divine light can shine in on ideas so that we might see things more clearly. In Religious Affections, Edwards in this way endeavors to show how divine glory, if indirectly, convinces the mind of the truth of Christianity:

[It] not only removes the hindrances of reason, but positively helps reason. It makes even the speculative notions more lively. It assists and engages the attention of the mind to that kind of objects; which causes it to have a clearer view of them, and more clearly to see their mutual relations. The ideas themselves, which otherwise are dim and obscure, by this means have a light cast upon them, and are impressed with greater strength; so that the mind can better judge of them, as he that beholds the objects on the face of the earth, when the light of the sun is cast upon them, is under greater advantage to discern them, in their true forms, and mutual relations, and to see the evidences of divine wisdom and skill in their contrivance, than he that sees them in a dim star light, or twilight (WJE 2:307-308).

The “attention of the mind” is engaged by the divine light in a similar way that the perception of those entering a state of assurance experience “the eyes of their minds
enlightened” (WJE 2:306). As they come to see the divinity of the Gospel and the truth of
divine things, so does divine light illuminate the ideas themselves, so that the mind “can
better judge of them.” To come to this, Edwards relies on the notion of “contrivance,”
which in Edwards’ theological vocabulary does not have the negative connotation of a
“scheme,” but is rather God at work in the very design of phenomena, in a way that the
human mind can come to perceive and know. To contrive is literally to “find or compose
together” (from the Latin con-tropare) and thus indicates how God communicates with
humanity the essential harmony of things. Berkeley, in his Principles of Human
Knowledge, in precisely the way Edwards uses it here, speaks of “the works of nature,
which discover so much harmony and contrivance in their make” (48). Edwards
himself uses the word often throughout his work, for example in both his short text which
we cited earlier, the “Wisdom and Contrivance of the World” as well as in his Freedom
of the Will as he recounts the “The grand scheme and contrivance for our redemption”
(WJE 1:255). Insofar as God’s communicated resistance is dependent on perception,
perception is dependent on perceiving it in contrivances of the world. The point is that,
through the contrivance of divine light shining in upon the ideas, God not only
communicates his wisdom, but shows himself to be the very substance of this
communication.

Yet for Edwards, the mind is not only passive in regard to perceiving God’s
excellency; there requires an active will to bring its communicated ideas into
contemplation. In Edwards’ system, the ability to will and to contemplate spiritual things
confers on humans a privileged ontological status. Humans and animals are both capable
of perception, that is, but the “abundant activity” of mind necessary to contemplate God’s work in the world sets humanity apart from the “beasts”:

The main difference between men and beasts is that men are capable of reflecting upon what passes in their own minds; beasts have nothing but direct consciousness. Men are capable of viewing what is in themselves contemplatively. Man was made for spiritual exercises and enjoyments, and therefore is made capable by reflection to behold and contemplate spiritual things. Hence it arises that man is capable of religion. A very great difference between men and beasts is that beasts have no voluntary actions about their own thoughts, for it is in this only that reasoning differs from mere perception and memory. It is the act of the will in bringing its ideas into contemplation, and ranging and comparing of them in reflection and abstraction. The minds of beasts, if I may call them minds, are purely passive with respect to all their ideas; the minds of men are not only passive, but abundantly active. Herein probably is the most distinguishing difference between them (WJE 6:374).

Again Edwards approaches Leibniz: for Leibniz, all things are capable of perception, but only animals were capable of sensation, or “heightened perception.” Furthermore, Leibniz differentiates humans from animals on the basis that humans have self-consciousness and a rational soul. Yet Edwards takes another fundamental step in distinguishing human from animal – namely towards an active understanding of the mind. The human mind, as distinguished from the animal mind, is not merely a passive receptor of sensation, but is capable of reflecting, contemplating, beholding spiritual things, acting voluntarily, reasoning, comparing, abstracting, etc. The human has the ability to associate ideas (as opposed to the direct consciousness of animals), which for Edwards evidences an “abundantly active” mind. Religion in Edwards’ sense is how the mind becomes self-conscious of not only its position in the world as a perceiving entity, but as implicit in the vast network of created minds held perfectly in the divine mind, relationships to which we feel agreement and consent, pleasure and pain, union or
disunion. Or, as Edwards provocatively says earlier in “The Mind,” “consciousness is the mind’s perceiving what is in itself – its ideas, actions, passions, and everything that is there perceivable. It is a sort of feeling within itself. The mind feels when it thinks, so it feels when it desires, feels when it loves, feels itself hate, etc” (WJE 6:345). These capabilities suggest a “larger and more constructive role of associations in intelligent performances,” or what Edwards will call an “appetite of mind” (WJE 6:373n.2; 6:372).

At the end of “The Mind,” Edwards collects a series of notes under the heading “[Plan for a Treatise],” for which he provides a contingent title: “The Natural History of the Mental World, or of the internal world: being a Particular Inquiry into the Nature of the Human Mind with respect to both its Faculties, the Understanding and the Will, and its various Instincts and Active and Passive Powers” (WJE 6:386). As he said in the “Introduction” he had already written for the treatise: “Concerning the two worlds, the external and the internal, the subject of natural philosophy; the internal, our own minds. How the knowledge of the latter is in many respects the most important. Of what great use the true knowledge of this is, and of what dangerous consequences errors here are, more than in the other” (WJE 6:387). He goes on to detail some of the subjects that this treatise will handle: he will treat in more depth the distinction between the human and the animal on the basis of active and passive intelligence, but will also seek to explore “wherein there is an agreement between men and beasts; how many things in men are like instinct in brutes” (WJE 6:391). In terms of the “connection of ideas,” he begins to question “how far all acts of the mind are from sensation” and thus “whether all ideas wherein in the mind is merely passive” (WJE 6:390). He plans a more nuanced inquiry into perception – “whether the mind perceives more than one object at a time,” “how far
the mind may perceive without adverting to what it perceived, as in the winking of
eyelids and other things” (WJE 6:391), and how judgment differs from “mere perception”
(WJE 6:390). He dares to conjecture “whether there could have ever been any such
thing as thought without external ideas immediately impressed by God” (WJE 6:392).
And, in contradistinction to his earlier injunctions, he wonders “how far imagination is
unavoidable in all thinking and why” (WJE 6:391).

Even if some of these topics are thoroughly treated by Edwards in later works
(The Nature of True Virtue, Freedom of the Will, Original Sin), he would never write
“The Natural History of the Mental World,” nor a different compendium (in the mode
perhaps of the Christian Philosopher) which would draw into order not only these notes
on “The Mind,” but also the plentitude of entries on natural philosophy in his “Things to
be considered,” “Natural Philosophy,” and countless “Miscellanies.” Nonetheless, from
them we can get a hint at the direction his thought was taking – including its decided
movement towards what would be the topoi of philosophy, psychology, and science in
the century to follow: things like the will, perception, the question of the animal, and
most fundamentally, a picture of the active mind. In this regard, Edwards demarcates
not only the trajectory of his own thought, but also the trajectory the American mind. If
only faintly mapped in Edwards’ notes, it suggests a parallel path to the one Perry Miller
takes “From Edwards to Emerson.” To be sure, the rise and fall of Deism and
Unitarianism, the waxing and waning of Locke’s influence over the American mind, are
each themselves essential to the emergence of New England Transcendentalism. But
what would it mean to go from Edwards to Emerson by following Edwards’
development, with the aid of natural science, but without the aid of Kant, of his very own
science of an active mind? For Joan Richardson, it is precisely Edwards’ active mind that evidences his forward-thinking:

Edwards’s conception of the “Appetite of the mind,” [n96] intrinsic to accessing the “sensible knowledge” that converts “speculative knowledge” into “actual ideas,” is, insofar as I have been able to determine, the original instance of thinking the mind an active organ, seeking nutriment for survival, in his terms variously ‘panting,’ ‘thirsting,’ ‘hungering’ for the words that will satisfy, catalyze the raw materials of experience into necessary intellectual, spiritual nourishment. Edwards thus converted, before Hume’s skepticism and Kant’s a priori clouded the idea of the mind as tabula rasa, Locke’s notion to his own use, an instigating example of the method that would later define Pragmatism. This understanding of the mind as an organ would, of course, come to inform the thinking of later theorists, Darwin, Emerson, and William James primary among them, with Whitehead then elaborating his philosophy of ‘organism’ around what he called the ‘appetition of thought’” (Richardson 56).

Neither Emerson nor any of the Romantics looked more deeply into this aspect of Edwards to see through the shadow of Calvinism that enshrouded him. Despite their idealistic affinities, that is, they will reject Edwards and with it the “the New England system.” The paradigmatic case is Coleridge, who, in a letter to John Ryland on 3 November, 1807 writes: “I greatly admired President Edwards’s works; but am convinced that Kant and his Critique of the Pure Reason, and more popularly in his Critique of the Practical Reason has completely overthrown the edifice of Fatalism, or causative Precedence as applied to Action” (Coleridge 35). Contra Coleridge, what would it mean to engage with the Edwards who asked, in the final note towards “The Natural History of the Mental World,” and in terms of the lively and active will that he posited, “Whether beauty, natural and moral, and the pleasure that arises from it in ourselves or others, be not the only object of the will, or whether truth be not also the object of the will” (WJE 393)?
From Edwards’ outpost, (and by no means a lonely outpost, even if one such as Fichte would call him a “solitary thinker of North America”), he stakes out his proximities to and fundamental differences from contemporary thinkers and the thinkers to come. If he hints at the combination of the ideal and the real, which Goethe, Schelling, and German Naturphilosophen will strive for in Kant’s wake, Edwards does so from the position of one who finds the ideal in the beautiful consent of all minds and all perceptions in the mind of God; he does so from the position of one for whom the real is not inconsequential in light of this consent, but essentially related to it. If he hints at the manifold renewals of perception sought by Romantic science and explicitly in the natural history of Emerson and Thoreau, it will not be in terms of an Emersonian “poetic perception of metamorphosis” driven by the fluidity and fugacity of forms of the living world. It will be in terms of an unadorned typology in which the transient world of nature is typical of the eternal complete system of the ideal series of ideas. For Edwards, in turn, science will not be “false because it is unpoetical” as it will be for Emerson; natural science will be true insofar as it seeks to “find out the proportion of God’s acting” (WJE 6:353). If it hints at the relational pluralism of William James’ radical empiricism, Edwards’ system will remain a closed system, structured by the volition of an immanent omniactive creator: “In the very center of the tangled web/another prisoner, God the spider sits."

No matter what one might think today of Edwards’ conclusions, and no matter how one might now judge the means he takes to arrive at them, no matter how one might position him among the varied milieux his thought addresses and comes to address, one nonetheless must recognize that Edwards’ thought is, at all points, oriented towards the
realization of human hope. It is not too much to say that every word Edwards wrote was meant to nourish the regeneration of the perceiving mind and seed the resurrection of the soul. He does so in a way that does not lose sight of the object, of the material, or of natural philosophy’s role in finding out these, but pants, thirsts, hungers “after words that will satisfy, catalyze the raw materials of experience into necessary intellectual, spiritual nourishment.” He devotes himself to effecting these catalytic conversions. He devotes himself not just to his own perception of the bliss at seeing the natural world awash with God’s incandescent splendor; he wants us to share in this incandescence, to radiate the hot fire at the center of life, that draws all others out of their lifeless winter sleep. Edwards’ true light is the spiritual light for which we are athirst, and shines from the splendent-faced saints; his true heat is not that which convects off the great furnaces of fear, but is that heat which subtly rises with the oncoming spring:

As the sun revives the plants and trees and fruits of the earth, so Christ Jesus by his spiritual light revives the soul and causes it to bring forth fruit. In the winter, the trees are stripped of their leaves and fruit, and stand naked, cease growing, and seem to be dead; the grass and herbs are killed, and all things have the appearance of death upon them. But when the sun returns, then all things have the appearance of a resurrection: things revive again, the trees and fields put on their green livery and begin to bud forth, anew, and flourish and grow. The grass and herbs begin to peep forth out of the ground, and all things look green and flourishing: the fields, meadows, and woods seem to rejoice, and the birds sing a welcome to the returning spring. The fields and trees are adorned with beautiful and fragrant flowers. Just such an alteration is made in the soul at conversion by Jesus Christ, only far more glorious: “My beloved spake, and said unto me, Rise up, my love, my fair one, and come away. For, lo, the winter is past, the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtledove is heard in our land; the fig tree putteth forth her green figs, and the vines with the tender grape give a good smell. Arise, my love, my fair one, and come away.” (Canticles 2:10–13) (WJE 10:541).
This is not the Edwards brandishing the wrath of hellfire, but the Edwards who, passing out of the forest on such a golden afternoon, finds himself borne back by the slender material of the filaments of an unseen spider’s web. It is the Edwards who, sitting at his desk as a shadow and a ray of light dally across his windowpane, once again raises his head to behold the beauty of the world.
Chapter 2

“Powers of the Mind”: Natural Science and Intellect in Emerson’s Later Thought

I had rather have a good symbol of my thought, or a good analogy, than the suffrage of Kant or Plato. If you agree with me, or if Locke, or Montesquieu, or Spinoza agree, I may still be wrong: but if the elm tree thinks the same thing, — if running water, if burning coal, if crystals, acids, & alkalis, say what I say, it must be true.

Emerson, “Poetry and Imagination”

…without Hegel there would have been no Darwin.

Nietzsche, The Gay Science

1. aperçu – Emerson’s science of the mind

In his 1841 essay “Intellect,” Emerson asks a question that will come to guide much of his later thinking: “Gladly would I unfold in calm degrees a natural history of the intellect, but what man has yet been able to mark the steps and boundaries of that transparent essence?” (Essays 417). Emerson’s attempt to answer, as well as his own work to map the structure of the mind – to mark the steps that traverse the intellect, or the boundaries that enclose it – could be said to occupy him for the better part of his last thirty years. It will [would?] culminate in his late, unfinished project, appropriately called “Natural History of the Intellect,” for which he began delivering material as part of the lecture series Mind and Manners of the Nineteenth Century (1848-49), and again during the Natural Method of Mental Philosophy (1858) and Philosophy for the People (1866) series. It arguably found its fullest expression in the Harvard University Lectures delivered under the same heading in 1870-71, which found Emerson lecturing alongside James Elliot Cabot on Kant, and a young Charles Sanders Peirce on “British Logicians.” Yet in Emerson’s own estimation, the project would never be brought to a
satisfactory completion. Indeed, the text of *Natural History of the Intellect* was only posthumously compiled from manuscript sources, lecture notes and previously published writings, first by Cabot (also his literary executor) and later re-edited with additions by Emerson’s son, Edward.⁶³

My concern here, however, is not so much with biographical or editorial details, but to explore the conceptual development of Emerson’s “unfolding” of what he calls his “science of the mind.” And, although the later period of Emerson’s career has received much less attention than that of his “major essays,” – due to presumptions that his mental acuity was in decline or that his Transcendentalism had become outdated –, it is at this time that his science of the mind, if imperfectly, finds its most elaborate articulation. It is in his later thinking that we can witness his most passionate, concerted effort to understand the “powers of the mind,”⁶⁴ to articulate how mental substance, through the fluid forms and forces that texture it, becomes united with the physical world.

“Intellect,” as both receptive *and* constructive (as he endows it in “Intellect”), remains the central term for this transaction. Yet what does it mean to propose a “natural history” of the intellect? How will Emerson thus seek to reconcile the methods of the physical sciences with those of metaphysical philosophy? What can this endeavor tell us about the character of Emerson’s thinking, a thinking famously averse to systematicity? Where can we position Emerson among his intellectual contemporaries of the early second-half of the nineteenth-century? How does he line up with Thoreau, who throughout the 1850s until his death in 1862 increasingly turned away from an “ideal” picture of nature towards encountering nature in its particularity, a particularity to which his *Journal* and later natural history essays bear witness? With the influx of Darwinism and Hegelianism into
American intellectual life? With the positivist science and philosophy arriving from Britain and France? With the work of young process-philosophers who would come to be called American Pragmatists?

To gain a foothold on these problems we too will have to move by calm degrees. My contention is that the question of how the intellect negotiates the world in which it finds itself is exemplified in Emerson’s work through his conceptualization of the dynamic relationship between natural science and philosophy. Natural science, from his early lectures on natural history and the first major statement of his thinking in *Nature*, to the late *Natural History of Intellect*, not only inhabits an inextricable part of Emerson’s writing; it provides the clearest marker of his intellectual development. How he understands nature conditions his contemporaneous philosophical enquiries – especially in terms of form, perception, and experience.

To be sure, we often find Emerson cataloguing the advances of key scientists: Linnaeus, the French botanists, the chemistry of Priestley, Lavoisier, and Faraday, the geology of Hutton, Playfair, and Lyell, the anatomical work of Buffon, Cuvier, and Geoffroy-St. Hilaire, the investigations into speciation of Lamarck, Agassiz, and Darwin, the astronomy of Copernicus and Laplace, and German *Naturphilosophie*. The achievements of these “grandees” serve as *vademecum* to Emerson’s lectures, essays, and journal meditations. He celebrates the work of recent science in “Life and Letters in New England” as part of a reaction of the “general mind” against the “too formal science” of the eighteenth-century: “there was, in the first quarter of our nineteenth century, a certain sharpness of criticism, an eagerness for reform, which showed itself in every quarter” (*CW* 10:169). Natural scientists effectively rewrote geo-history, the development and
durations of the physical earth, its perpetual forces, its bloom into myriad different forms. As Foucault carefully details in *The Order of Things*, at the threshold of the nineteenth century, conventional natural history was superseded by the emergence of a new discourse in the sciences of life, the discourse of biology. Systems of ordering and classifying the world were rebuilt and set in motion; new attention was paid to internal “organization,” and processes of development began to be understood as constitutive of natural phenomena. Even the so-called “pseudo-sciences,” as Emerson apologizes – Lavater’s Physiognomy, Gall and Spurzheim’s phrenology, mesmerism – put science and knowledge “back in touch” with what is “human” or “genial.” Each “affirmed unity and connection between remote points,” and thus each provided “excellent criticism on the narrow and dead classification of what passed for science; and the joy with which it was greeted was an instinct of the people which no true philosopher would fail to profit by” *(CW 10: 169).*

Emerson undoubtedly reckoned himself one such “true philosopher.” However, whereas Foucault emphasizes this “epochal” shift through eighteenth-century French natural science, Emerson, to a great extent, relies on Kant, Goethe, and German *Naturphilosophie* to develop his approach to natural science and philosophy. 65 Although Emerson’s reading was famously eclectic, that is, his thought, especially in regard to the relationship between nature and mind, has a decidedly German accent. German metaphysics provides him the “philosophical vocabulary” for his most perduring questions – of how we are to understand the forms and transitions of the physical world, of how humanity, through an understanding of such a dynamic “marriage of matter and mind,” can create new worlds of meaning within its intellectual, moral and spiritual life.
German thought gave Emerson the means to appraise the philosophical value of these gains in the sciences. As he says in a “formative journal entry” for his *Natural History of Intellect* project⁶⁶: “the highest value of natural history & mainly of these new & secular results like the inferences from geology, & the discovery of parallax, & the resolution of Nebulae, is its translation into an universal cipher applicable to Man viewed as Intellect also” (*JMN X*:136). So in order to understand how Emerson arrives at his later thinking we will have to look specifically at how he interacts with German thinkers, especially in terms of the questions of form, perception and experience, the triad that mediates the shifting correspondence of thinking and world, that translates nature into a universal cipher.

So, despite his inheritance of a Platonized, “Schellingized” Kant from Coleridge⁶⁷ (including the infamous “misunderstanding” of Kant’s distinction between Reason and Understanding), and his persistent uncritical use of other transcendental idealistic terms deflected from Kant’s original usage by Carlyle or Cousin, Emerson’s starting point remained the central problematic of Kant’s first *Critique*: namely how is it that modern science is thinkable. This, too, Coleridge had seized upon as he asks in *Biographia Literaria* “Is philosophy possible as a science, and what are its conditions?” (Coleridge 439). For Kant, who found himself heir to a complete reformulation of the thinking of natural science a few decades earlier, this question became situated within the post-Newtonian terrain on which mathematics and physics had been revolutionized, natural laws universalized, and natural history torn from a predetermined grid of natural theology. Kant’s critical enterprise, in rigorously defining the limits and scope of human knowledge and metaphysical inquiry, worked to “justify” the role of science as within
these limits. This way alone, Kant thought, could one put human understanding of the physical world on firm epistemological footing, and likewise open a place for faith outside knowledge. Although Emerson, after Coleridge (and the developers of post-Kantian thought in Germany, Jacobi, Fichte, Schelling, and Hegel), transgresses the boundaries Kant sets for epistemology and metaphysics, Emerson’s “science of the mind” is likewise situated at the dynamic interface of the mind and the physical world.

Emerson will thus bear witness to, seek to continue, and in some aspects reject the intellectual developments of Kant and his followers, each of whom adds different emphases (morphology instead of dynamics, development instead of teleology, becoming instead of being) to Kant’s “metaphysics of nature.” As Emerson summarizes at the completion of the passage cited above from “Life and Letters of New England”:

Goethe revolted against the science of the day, against French and English science, declared war against the great name of Newton, proposed his own new and simple optics: in Botany, his simple theory of metamorphosis; — the eye of a leaf is all; every part of the plant from root to fruit is only a modified leaf, the branch of a tree is nothing but a leaf whose serratures have become twigs. He extended this into anatomy and animal life…The revolt became a revolution. Schelling and Oken introduced their ideal natural philosophy, Hegel his metaphysics, and extended it to Civil History (CW 10:169).

Emerson does not merely chronicle these changes: he takes from them the cardinal points for his thinking. Goethe, who developed parallel to Kant and at key points responds to him, took as his central question “how did the form arise out of the interaction of idea and matter?” (Goethe xiii). His “simple theory of metamorphosis” from his work on plant morphology becomes a mobile analogy for the exfoliating movement of Emerson’s own thought. Schelling’s Identitätslehre opened for Emerson the possibility of unifying the real and ideal, subject and object, nature and intellect, as in Schelling’s famous chiasmus
“Nature should be Mind made visible, Mind the invisible Nature.” The allure of Schelling’s quasi-mystical pantheism and philosophy of revelation strongly attracted Emerson, as did his thinking about polarity and organic growth. Oken, for Emerson another “scientific poet” in the mold of Goethe, drew on Schelling’s thought to devise a speculative classificatory scheme on the basis of sensory organs and metamorphic osteology; his notions of cellular vesicles and spiral formation will deeply inflect Emerson’s own notions of evolutionary form. Hegel’s logical system proposed a “rhythmic unfolding” of nature, which extended to a thinking of historical development as a self-realization of freedom. Nonetheless, Hegel’s thought, as Emerson came across it via a variety of channels, most notably through the German immigrant intellectual J. B. Stallo, and later the Scottish philosopher J. H. Stirling, is of utmost importance for understanding Emerson’s thinking of nature and form after 1849, the year that he read Stallo’s *General Principals in the Philosophy of Nature*. As he will later say, following Stallo, Hegel put things in “Right relation.” And, with Ohio Hegelians such as Stallo (as well as his successors, the “St. Louis Hegelians”) in mind – and not without a touch of self-criticism – Emerson openly states in his journal: “here are in America a nation of Germans living with the…organon of Hegel in their hands, which makes the discoveries & thinking of the English & Americans look of a Chinese narrowness, and yet good easy dunces that we are, we never suspect our inferiority” (*JMN* XIV: 58).

Although the character and significance of these encounters can so far only be inferred, Emerson’s interaction with the work of Goethe, Kant, Schelling, and Hegel marks key transition points to his approach to science and philosophy, serving both to reflect and to refract it. The “metaphysical zymosis,” as he calls it in “Eloquence,”
“culminating in Kant, Schelling, Schleiermacher, Schopenhauer, Hegel, and so ending” 
(CW 8:131), allowed Emerson to understand shifts in science as cutting far deeper into 
the fabric of human knowledge than could any intellectual history of its “paradigm 
shifts.” Thus it is not surprising that the definition of modernity Emerson offers in his 
Journal “AZ 1850” is cast strikingly in the terms of the German Weltanschauung. For 
Emerson, the modern era, as opposed to the Greek which deified nature and the Christian 
which degraded it, is marked by a new “tendency…to marry mind to Nature, and to put 
Nature under the mind, convert world into an instrument of Right Reason.” Only thus 
does modern man “[go] forth to the dominion of the world by commerce, by science and 
by philosophy.”71 Let us turn then in greater depth to Emerson’s encounters with these 
Germans, especially with Goethe and Hegel, each of whom exerted especial influence on 
Emerson’s mature articulation of the marriage of matter and mind.

2. He sees at every pore 
If, as Henri Bergson holds, a philosopher’s work is pervaded by the unfolding of a single 
thought, for Emerson it is the thought of “unfolding” itself. The driving force of 
Emerson’s thought is that form – whether natural form, object-form, political or moral 
form, forms of the self or of the mind – to remain vital can only be understood in terms of 
metamorphosis. He says this in a myriad of ways: already by the “Lord’s Supper 
Sermon,” he has rejected “exalting” particular symbolic forms such as the Eucharist, 
declaring form to be “essential as bodies,” such that “to adhere to one form, the moment 
after it is outgrown, is unreasonable, and it is alien to the spirit of Christ” (CW 11:20). He 
thus resists natural theology’s pre-scripted scheme for the universe (wherein specimens
or species “conveyed the meanings” of God) as the “dead forms of our forefathers.” He persistently celebrates those who break established political, moral, philosophical systems from within, who destroy them in the name of life. As he states in his 1859 lecture “Morals,” “Great men serve us, as insurrections do, in tyrannical governments. The world would run into endless routine, and forms incrust forms, till the life was gone. But the perpetual supply of new genius shocks us with thrills of life” (SL 253). Calamity or the death of a friend or loved one is not without the “compensation” that new formations or styles of living then open before us.

Yet forms of everyday life can imprison us most: as Emerson will say in “Fate,” even the “shocks and ruins” of the brute forces of nature or personal calamity are “less destructive to us than the stealthy power of other laws which act on us daily” (Essays 772). These constitute the “book of fate,” the physical forms that tyrannize and limit us, the forms we are given and about which we can do nothing. Likewise, personal identity becomes our prison with conformity as its warden: “Every spirit makes its house; but afterwards the house confines the spirit” (772). Thus Emerson valorizes thought as that which “dissolves the material universe” (782); “Intellect annuls Fate”; “every solid in the universe is read to become fluid on the approach of the mind, and the power to flux is the measure of the mind” (790). This ability of thought indexes to his famous “aversion to conformity”; it is an “out-thinking” of the fixed self for the sake of self-culture, a sloughing-off of the restraining forms of personal identity by the impersonal, othering force of thinking. In this sense we can understand how what would appear to be “formal” concerns in Emerson’s thinking (beauty, moral perfectionism, natural form) remain in contact with his philosophy of “ordinary” experience. Form is neither esoteric nor
detached any more than it is ideal or unreachable; rather, fluent form is the beating heart at the core of the physiognomy of the ordinary. Reform thus serves a “vital function” (SL 263), whether through the upheaval of revolution or natural catastrophe, in the redirection of currents of thought, or in subtle shifts to our mundane registers of morality, politics, or personal habits. Whereas all “forms of old age” (fever, intemperance, insanity, stupidity, and crime; conservatism, appropriation, inertia), as he says in “Circles,” become dead ends, “not newness, not the way onward,” metamorphosis is the world made young. It is the catalytic heat of life, in the midst of life. From out of the creative dissolution of form, life perpetually emerges.

Yet it is in Emerson’s interest in natural science that he registers most profoundly this idea of metamorphosis, to the extent that all the rest of these “metamorphoses” could be said to comment on the fundamental shift from fixed form to transition he finds in Goethe’s *Metamorphosis of Plants*. In general, Goethe’s aesthetico-scientific thinking indelibly shapes Emerson’s approach to natural history and epistemology. Each shares a similar philosophical *Stimmung* in that each, although intensely interested in the actions of the mind, is at the same time hesitant to codify his findings into a systematic metaphysics. Goethe provides Emerson with confirmation of a “pure plastic Idea” of Nature such that metamorphosis becomes variously “the true Classification” and “the law of the Universe.” As in the brief synopsis he offers in “Life and Letters of New England,” Emerson celebrates Goethe’s stubborn resistance of the entrenched assumptions of the natural philosophers that came before him, and his equal obstinacy towards those that followed. As he remarks in “Goethe; or the Writer”: “He has said the best things about nature that ever were said. He treats nature as the old philosophers, as
the seven wise masters did, - and, with whatever loss of French tabulation and dissection, poetry and humanity remain to us” (753). Goethe sharply critiqued Newton’s work on optics and white light, proposing instead his own theory of colors. In the face of eighteenth-century anthropocentric claims that man is separate from all other animals, he discovered the Os intermaxillare, a tiny jawbone common to all mammals, an anatomical missing link which put humanity in continuity with the so-called “lower” mammals. In “Goethe,” Emerson elaborates his achievements in a variation of a central passage for his thinking that will appear in several of his essays, lectures, and journal entries:

Eyes are better on the whole than telescopes or microscopes. He has contributed a key to many parts of nature, through the rare turn for unity and simplicity in his mind. Thus Goethe suggested the leading idea of modern botany, that a leaf or the eye of a leaf is the unit of botany, and that every part of a plant is only a transformed leaf to meet a new condition; and, by varying the conditions, a leaf may be converted into any other organ, and any other organ into a leaf. In like manner, in osteology, he assumed that one vertebra of the spine might be considered as the unit of the skeleton: the head was only the uttermost vertebrae transformed. “The plant goes from knot to knot, closing at last with the flower and the seed. So the tape-worm, the caterpillar, goes from knot to knot and closes with the head. Man and the higher animals are built up through the vertebrae, the powers being concentrated in the head.” In optics again he rejected the artificial theory of seven colors, and considered that every color was the mixture of light and darkness in new proportions. It is really of very little consequence what topic he writes upon. He sees at every pore, and has a certain gravitation towards truth (Essays 753).

This process of transformation is based on a fundamental “unit” of transformation, but unit here should not be understood as a fixed part of the plant, but as an “ideal structure” (or Ur-plant) that is essential to the life-processes of all plants. As in Emerson’s 1833 experience at the Jardin des Plantes, Goethe had his own botanical revelation walking in the public gardens in Palermo in 1786, as he recounts in his Italian Journey. There he at last discovered what he held to be the Ur-plant: “it came to me in a flash” he remarks, “that in the organ of the plant which we are accustomed to call the leaf lies the true
Proteus who can hide or reveal himself in all vegetal forms. From first to last, the plant is nothing but leaf” (Italian Journey 363). Though an Ur-Phaenomenon, the Ur-plant did not so much signify an origin to all plants in terms of a “what” or a “where,” but [as it] described the “how” of all plants. This “how” is the process of metamorphosis, embodied in the leaf as the unit of morphological botany. The leaf is an intensification of seed leaf into stem leaf, and in turn sepal into petal. The leaf is neither arkhe nor final cause, but a perpetual in-between of content and form. This idea departs from eighteenth-century conceptions of form and classification: Morphe becomes understood as metamorphosis and multiplicity, form as fugacity rather than fixity, singular self-enclosed organisms as pluralities. Classification can no longer be thought on the basis of atemporal similarities and differences, the basis of the Linnaean system, but in a processual, temporalized morphology. As Elaine Miller writes, “in researching the metamorphosis of plants Goethe [took] a polemical stance against Linnaeus for reducing the study of plants to the cataloguing of their parts, for examining the plant not in its living intercourse with other natural phenomenon contiguous to it, but as a dead and dissected inventory of components” (58). Form becomes the “manner of flowing,” a rhythm of vital power that does not necessarily happen gradually or linearly. Form in other words is not simply configuration or structured arrangement (Gestalt), but on-going formation (Bildung). As in of Gestalt, form is plural, but its plurality is always changing, re-forming or re-assembling itself. As Goethe writes in his text On Morphology:

No living thing is unitary in nature; every such thing is a plurality. Even the organism that appears to us as individual exists as a collection of independent living entities. Although alike in idea and predisposition, these entities, as they materialize, grow to become alike or similar, unlike or dissimilar. In part these entities are joined from the outset, in part they
find their way together to form a union. They diverge and then seek each other again; everywhere and in every way they thus work to produce a chain of creation without end (64).

This passage restates what Goethe earlier makes explicit: “When something has acquired a form it metamorphoses immediately to a new one. If we wish to arrive at some living perception of nature we ourselves must remain as quick and flexible as nature and follow the example she gives” (65). This demands that specimens not merely fill a drawer in a cabinet, nor a rung of the *scala natura*; but must be treated as living entities, a “chain of creation without end,” to be integrated by an animating imagination.

Thus for Emerson the primary education of the “American Scholar” relies on Goethe’s instruction: it is “to [sit] down before each refractory fact; one after another…and [go] on forever to animate the last fibre of organization, the outskirts of nature, by insight” (*CW* 1:54). Classifying becomes an organic process (morphology), classifications emerge as merely makeshifts or means, not as final ends, nor proofs of historical or theological predeterminations. Metamorphosis becomes the law of the universe insofar as it is the law of perpetual change. Metamorphosis becomes the “true classification,” in turn, because it recognizes relations between things as likewise always in transit. For Goethe, the “record is alive” (*Essays* 746).

Emerson, after Goethe, registers this shift to metamorphosis and morphology as directly impinging on how we understand mental activity; therefore metamorphosis will take on a central role in the construction of his “science of the mind.” Formation is not just apropos of the natural forms of rocks, plants and animals, but on [as taking place in?] the perceiving-thinking scientist (or poet-scientist). As Goethe indicates in his “Significant Help Given by an Ingenious Turn of Phrase”: “my thinking is not separate
from objects…the elements of the object, the perceptions of the object, flow into my thinking and are fully permeated by it…my perception itself is a thinking, and my thinking a perception” (Goethe 39). As Goethe will detail in his short piece on Kant, “Judgment through Intuitive Perception,” the work of perception is to “penetrate the divine forces of nature” via an intuitive, imaginative movement from the empirical phenomenon to the archetypal (31-32). This will become increasingly important to Emerson as he develops through Goethe a notion of the “poetic perception of metamorphosis,” a notion that will come to define his later thought, and which we will explore below. For now, suffice it to say that Emerson will remain close to Goethe’s approach to philosophy and natural science, even as his thought undergoes other decisive shifts, e.g. away from a mystical, neo-platonic idea of form towards one in its own way “evolutionary.” This approach is perhaps best rendered by Schiller, who shortly after his first encounter with Goethe, sends him a letter estimating his “genius” and comparing it with his own philosophical method:

What is difficult for you to realize (since genius is always a great mystery to itself) is the wonderful agreement of your philosophical instincts with the pure results of speculating reason. Certainly at first, it seems that there could not be a greater opposition than that between the speculative mind, which begins with unity, and the intuitive, which starts from the manifold [of sense]. If the first seeks experience with a chaste and true sense, and the second seeks the law with a self-active and free power of thought [Denkkraft], then they cannot fail to meet each other half way. To be sure, the intuitive mind is only concerned with the individual, the speculative only with the kind [Gattung]. But if the intuitive has genius and seeks in the empirical realm the character of the necessary, it will always produce the individual, but with the character of the kind; and if the speculative mind has genius and does not lose sight of experience—which that sort of mind rises above—then it will always produce the kind but animated with the possibility of life and with a fundamental relationship to real objects.
We must keep in mind that Schiller’s letter arrives not long after Goethe read Kant’s *Critique of Judgment* with both great satisfaction in terms of its ability to reconcile the aesthetic with the scientific, as well as lingering doubts as to what was at stake in terms in this for living organisms. Schiller thus works hard to persuade Goethe of the necessity of Kant’s system, and here proposes a sort of compromise between the intuitive and speculative minds. At the same halfway point where the epistemological approaches of Schiller and Goethe meet could be said to be the idealist-realist position Emerson will struggle to articulate, and which will lead him to undertake a “natural history of the intellect.” At this point, where Goethe’s intuitive mind that seeks the necessary in empirical sense data meets Schiller’s speculative mind which does not lose sight of experience, each could be said to be in contact with the possibility of life and real objects. At such a meeting point, Emerson will work to ground his transcendental idealism in the “facts” of the physical sciences, especially the fact of metamorphosis.

Although the genealogy of Goethe’s relationship to Kant and post-Kantian thought – to German Idealism and British and German Romanticism – is complex and by no means linear, and although Emerson’s understanding of this relationship was not always clear, we can say with confidence that Goethe’s morphology provides a constant point of reference for Emerson’s later thought in its drive to identify the ideal and real. It will underwrite Emerson’s organic notion of mental structure, and lead him to posit intellect as actively constructing and imaginatively classifying the world. As we will see, this culminates in his late, unfinished project, *Natural History of Intellect*, in which he attempts to write a “metaphysics” of everyday life through attention to the “natural facts” of our ongoing intellectual immersion into place.
3. A subtle chain of countless rings

On the occasion of the re-edition of his first book, *Nature*, in 1849, Emerson made a subtle, but significant alteration to his text. Instead of the epigraph from the Neoplatonic philosopher Plotinus, “Nature is but an image or imitation of wisdom, the last thing of the soul; nature being a thing which doth only do, but not know,” which had served to adorn *Nature* since it was first published in 1836, there now appeared a new short poem from Emerson’s own hand:

A subtle chain of countless rings
The next unto the farthest brings;
The eye reads omens where it goes,
And speaks all languages the rose;
And, striving to be man, the worm
Mounts through all the spires of form.

Far from any mere caprice, these new lines indicate a continuing shift of emphasis in Emerson’s thought from a Neoplatonic, “emanationist” understanding of nature to one that implies an immanent “evolutionary” idea of form. This shift bears directly on how Emerson will articulate the connection between the physical world and the intellect in his later thought. It marks a change in how Emerson understands metamorphosis itself: metamorphosis, the becoming of natural form, becomes resituated in the immanence of the physical world rather than as a perpetual degeneration from a perfect, eternal idea. Emerson can then expand Goethe’s metamorphosis as pervasively physical. In a broader sense, it marks a continued, if gradual departure from Emerson’s early idealism (marked by natural theological understanding of the universe) to one closer to the half-way point of Goethe and Schiller, the point at which the speculative mind always keeps empirical experience within its sight. These are the calm degrees Emerson follows towards his *Natural History of Intellect.*
To see this more clearly, we can briefly consider Emerson’s Neoplatonism. The initial epigraph, an abbreviated quotation from Plotinus’ fourth *Ennead*, appeared in Cambridge Platonist Ralph Cudworth’s *True Intellectual System of the Universe*, which Emerson encountered as he first composed *Nature*. Cudworth, who cites the passage in full, uses it to elaborate the Platonic notion that “nature is divine art embodied” (302), a theme that Emerson found consonant with the enthusiastic transcendentalism of *Nature*. In Cudworth’s text, the passage begins with the question “How doth wisdom differ from nature?” – which for him involves an idea of nature which acts “subserviently under the divine architectonical art and wisdom of the divine art of understanding” (302). Or, in Plotinus’ words, “doth service of which does do without knowing the reason of what it doth.” The difference between wisdom and nature then, is that nature is the “drudging executioner” of human wisdom as expressed in art, and thus divine wisdom. The eternal soul remains separate from nature; the phenomenal or corporeal world is relegated to being the soul’s ignorant slave. Humanity, then, as the conduit of divine (which the “transparent eyeball” passage makes clear), must put nature to use toward its material and spiritual needs, as Emerson stresses in the section of *Nature*, “Commodity.” By the time of his essays “The Over-Soul,” “Nature” and especially his 1841 lecture, “The Method of Nature,” each written after a period of intense study of Plotinus and other Neoplatonists, Emerson’s mystical, archetypical, intuitive vision of nature reaches full bloom. As an example, we can compare a typical passage from Plotinus to one from Emerson’s “Over-Soul.” As Plotinus writes in *Ennead IV*: “Nature, at once divisible and indivisible, which we affirm to be soul has not the unity of an extended thing: it does not consist of separate sections; its divisibility lies in its presence at every point of the
recipient, but it is indivisible as dwelling entire in the total and entire in any part” (305).

In “The Over-Soul,” then, we find Emerson clearly restating Plotinus in the language of his Transcendentalism:

We live in succession, in division, in parts, in particles. Meantime within man is the soul of the whole; the wise silence; the universal beauty, to which every part and particle is equally related, the eternal ONE. And this deep power in which we exist and whose beatitude is all accessible to us, is not only self-sufficing and perfect in every hour, but the act of seeing and the thing seen, the seer and the spectacle, the subject and the object, are one. We see the world piece by piece, as the sun, the moon, the animal, the tree; but the whole, of which these are shining parts, is the soul (Essays 187).

Likewise in the essay “Nature,” Emerson worked to establish a metaphysics of nature wherein “nature is the incarnation of a thought, and turns to a thought again, as ice becomes water or gas. The world is mind precipitated” (Essays 555). In “The Method of Nature,” Emerson explicitly ties this Neoplatonic view of nature to Goethe’s metamorphosis, giving yet another illustration of how life, mind, and nature are never static or still, but always moving, shifting and changing shape. What results is a mystical, ecstatic idea of nature: to exhibit the oneness of all natural phenomena, Emerson turns to a “study of the mind in nature, because we cannot steadily gaze on it in mind; as we explore the face of the sun in a pool, when our eyes cannot brook his direct splendors.” Nature is thus perpetually standing outside of itself, a thought which Emerson again casts in neo-Platonist terms: “Every natural fact is an emanation, and that from which it emanates an emanation also, and from every emanation is a new emanation” (Essays 119).

Yet as the 1840s ended, Emerson became less and less confident that this ecstatic, mystical, view of nature could satisfy the “point-by-point” correspondence of the mind
and matter he increasingly sought. Soul shorn from body experienced only in flashes of mystical transcendence cannot fully account for the rich phenomenal world continually impinging on us. And though Emerson was persistently interested in natural science throughout his career, his avidity for natural science was now becoming renewed. In 1846, Louis Agassiz arrived from Switzerland to Boston; in 1847, Emerson himself toured England gaining firsthand experience of British natural science. Agassiz with his massive collection networks and British natural scientists like Hunter, Owen, Faraday, and later Darwin offered Emerson new terms for the physicality of matter in its marriage with mind. Chambers’ *Vestiges of Creation* (1844) offered Emerson a vivid description of the biological evolution of natural forms, even if its picture was scientifically deeply problematic. As Robinson writes, “The renewed exposure to science had reinforced Emerson’s sense of the monistic unity of matter and mind, and he expressed that insight in terms of a unifying power” (185). Likewise, if metamorphosis was the “ideal structure” which Goethe showed unified all of nature, couldn’t then nature’s pervasive, constant changing also be articulated through the real, physical forms of nature themselves? Thoreau, too, was moving in a similar direction, one increasingly oriented towards the experience of particular knowledge in terms of the natural data he collected and catalogued in his encyclopedic *Journal* during the 1850s and early 1860s. If Emerson will integrate only selectively from Owen, Chambers and Agassiz, etc., if he will ultimately not go as far as Thoreau in attempting to let his thinking arise from particular natural specimens, he nonetheless worked to put his thinking of nature on more concrete ground. For Emerson this concrete ground entailed an idea of nature still
indexed to an idealist notion of the marriage of nature and mind – in fact it now demanded their concrete unity.

The contention here is that Emerson found affirmation of such a unity in the overcoming of the division of matter and mind in German philosophy of nature, especially that of Oken, Schelling, and Hegel. And, even if his own poetic affinities were closer to what he perceived in Oken and Schelling, the force of Hegel’s thinking came to most significantly confirm for Emerson the organic unity of mind and nature. It is thus provocative to measure the effect of Hegel on Emerson’s later thought if we are to locate its philosophical bearings, even though an extended exegesis of Hegel’s philosophy of nature is beyond our scope, and in many ways exceeded Emerson’s own philosophical capabilities. Central to any study of Emerson’s affinity to Hegel must be his *Philosophy of Nature*, the second part of his *Encyclopedia of the Philosophical Sciences*. Here Hegel gives a complex picture of the stages of the rational development of the mind as immanent in nature in a way that both accounts for nature’s radical otherness and avoids the dualism of mind and world. To this end, Hegel, like Emerson, drew on the whole of eighteenth and early nineteenth-century natural science, and meticulously labored to incorporate its discoveries into his conceptual framework. In the introduction to *Philosophy of Mind*, Hegel concisely states this program:

> [P]hilosophical thinking knows that Nature is idealized not merely by us, that nature’s assunderness is not an absolutely insuperable barrier for Nature itself, for its Notion; but that the eternal Idea immanent in Nature, or what is the same thing, the essence of mind itself at work within Nature brings about the idealization, the triumph over assunderness, because this form of mind’s existence conflicts with the inwardness of its essence, Therefore philosophy has, as it were, only to watch how Nature itself overcomes its externality, how it takes back what is self external into the centre of the Idea, or causes this centre to show forth in the external, how
it liberates the Notion concealed in Nature from the covering of externality and thereby overcomes external necessity. This transition from necessity to freedom is not a simple transition but a progression through many stages, whose exposition constitutes the Philosophy of Nature (*Philosophy of Mind* 13).

Hegel thus circumscribes the philosophy of nature as the recognition of the implicit reason of nature, as Schelling called it, its “petrified” or “frozen intelligence,” yet one “that does not remain petrified and dead; the very stones cry out and raise themselves to Spirit” (*Hegel Philosophy of Nature* 15). In turn, Spirit “lets itself go” (*ausgelassen*) in Nature, “a Bacchic god unrestrained and unmindful of itself” (15). Through the process of estranging itself in nature, Spirit finds itself there and takes back what is apparently external to it into its center. This is Spirit’s “triumph” over Nature’s “assunderness” – over its radical otherness, its externality (*Äusserlichkeit*), such that Nature is revealed to be interior to Spirit. As Hegel succinctly formulates it: “the goal of the Philosophy of Nature [is] that Spirit finds in nature its own essence…The study of nature is thus the liberation of Spirit in her, for Spirit is present in her in so far as it is in relation, not with an Other, but with itself. This is also the liberation of Nature; implicitly she is Reason, but it is through Spirit that Reason as such first emerges from Nature into existence” (13).

The mind is thus for Hegel immanent in nature; the task of philosophy is to “watch over” this necessary, logical progression of the Idea through the externality of nature, as it passes from the necessary estrangement of nature to freedom (or, loosely translated into Emersonian terms, from fate to freedom).

It would be imprecise to speculate that Emerson read and digested with ease such passages from Hegel’s philosophy, which on the whole remained famously opaque to him. Rather Emerson, as is typical of his reading of many philosophers, found assistance
in secondary sources. As we noted earlier, Hegel came to Emerson through his reading of commentaries like J.B. Stallo’s 1848 *General Principles*, J.H. Stirling’s massive *The Secret of Hegel* (for whom Emerson writes an endorsement that appears on the flyleaf of the book along with one from Carlyle), as well as from Varnhagen von Ense’s *Tägebücher*, Hoefer’s *Nouvelle Biographie Générale*, and Albert Schwegler’s *Handbook of the History of Philosophy*. Likewise, A. Bronson Alcott, James Elliot Cabot, and Emmanuel V. Scherb, among others, each avidly endorsed Hegel to Emerson. Emerson would come to correspond with and meet Ohio and St. Louis Hegelians such as Moncure Conway, W.T. Harris, and Denton Snider, paying the St. Louis faction a visit in 1867. Emerson was thus very aware of the strong presence of Hegel’s thought in American intellectual life in the early second-half of the nineteenth-century. American Hegelianism prepared the reception of Darwinism in America, and drew sharp lines with those who still kept vigil over strains of British empiricism such as Scottish Common Sense philosophy that had marked the earlier part of the century. Thus American Hegelianism marks the hinge-point between Transcendentalism and Pragmatism as major moments in American philosophy. Indeed it was Harris’s *Journal of Speculative Philosophy* (1867-1893) that first published William James, Peirce, and Dewey.

Yet it was Stallo’s *General Principles* that provided Emerson with the clearest means of integrating German *Naturphilosophie*, as culminating in Hegel. A journal entry from November 1849 in which Emerson compiles a number of quotations copied from Stallo lists the major themes of German thought that would shape Emerson’s later thinking, providing markers for the departure from his earlier conceptions of nature:

> The configurations of Nature are more than a symbol, they are the gesticular expression of Nature’s inner life…Whatever exists, exists only
in virtue of the life of which it is an expression….Every individual existence is but a living history…The development of all forms will be spiral…Matter is only by its relativity. The quantitative qualitative existence of matter is an uninterrupted flight from itself, a never terminating whirl of evanescence…Animals are but foetal forms of man.  

The presence of not only of Hegel, but also of Oken is palpable. Stallo explicitly cites Oken as saying “the development of all individual forms will be spiral” and “animals are but foetal forms of man” (16). All forms are initial and in perpetual transition, perpetual “-volutions,” involutions and evolutions. As Emerson will say in “Poetry and Imagination,” “Nature is a vast trope” (W 8:15), a turning metonymy, a subtle chain of countless rings. Likewise, Stallo lucidly and attractively delineates Schelling’s contribution:

[T]he energies of the mind are called into existence by material objectivity and the external world attains to its true reality in the intelligence of the mind. The world exists not in its truth, unless it be through its organized intelligence, man, who is as it were, the eye which surveys itself…this higher unity of mind and nature was the grand aperçu of the Schellingian philosophy, but it was from its nature intuitive, and its only authentication depended upon the genial intelligence of the philosopher and poet (331).

Emerson will remain strongly attracted by Schelling’s formulation of the identity of the real and ideal, his notions of polarity and striving, and nature as the poetry of the mind. Emerson, too, strives to authenticate his work through such “genial intelligence of the philosopher and poet” – an apt description for Emerson’s later work. Yet for Stallo, Schelling’s “grand aperçu” opens a series of unresolved questions: “Why is the infinite intensity of mind brought to light in the infinite extension of matter? What forces the idea to become a form, the ‘word to turn flesh,’ and the form to resolve itself to and [an?] idea? – The answer,” Stallo confidently asserts, “is the philosophy of Hegel.” For Stallo, that is, it is Hegel who pursued the identity of mind and matter most systematically and
most convincingly – and he did not rely on an intuitive, poetic, and at times mystical thinking to do so. Emerson, parroting Stallo, thus comes to say that it is Hegel who puts things in “Right relation,” the right relation of perpetual metamorphosis which Emerson long recognized. Now this metamorphosis could be described as nature’s rhythmic unfolding, a rhythmic unfolding through which lower forms of life could “mount through all the spires of form” and flower into human intelligence. Stallo succinctly summarizes this as the core principle of German Naturphilosophie, crowned by Hegel’s absolute idealism:

The fundamental principle upon which, according to my conviction, all true philosophy of nature rests, is, that the different manifestations of the vitality which bursts forth in nature’s phenomena are comprehensively united, centered in the mind, that the implacable rigor of cosmic laws, which sways extensive matter, is identical with the eternal freedom of mind in its infinite intensity (Stallo vii-viii).

Stallo thus pulls together notions of nature’s multiplicity, vitality, and transformation into the centrality of mind; he identifies the laws which govern both the fatality of extensive matter and the freedom of the infinite intensity of mind.

Hegel’s systematic demonstration of this through a series of moments in the progressive unfolding of nature further exacerbated Emerson’s departure from a mystical Platonism towards the immanent self-manifestation of spirit in nature. As Hegel himself recognized, as in the Zusatz to section 249 of his Encyclopedia Philosophy of Nature, emanation and evolution were “two forms under which the serial progression of Nature is conceived” in contemporary natural science. Emanation involves “a series of degradations of being, starting from the perfect being” or ideal form, which then suffers successive degenerations to the point that “there is an absence of form” (21). The “way
of evolution,” conversely, “which starts from the imperfect and formless, is as follows: at first there was the liquid element and the aqueous forms of life, and from the water there evolved plants, polyps, mollusks, and finally fishes; then from the fishes evolved land animals, and finally from land animals came man” (Hegel 21). Hegel, although deeply marked by Plotinus’ thought, will nonetheless not share this notion of form as a slow degeneration from a higher form. Hegel will not fully endorse evolution (i.e. the pre-Darwinian sense) either – also rejecting it as “one-sided and superficial.” But, he will prefer it in its movement towards more perfect forms, and the light these higher forms shed on nature’s leasts. Hegel’s presentation of nature as a dialectical unfolding of spirit out of the natural world, his program in his *Philosophy of Nature*, implied this perpetual ascension. Via Stallo, Emerson’s mature thought came to be imprinted by a Hegelian teleology of nature’s continual progress towards higher forms to the extent that Hegel provides a vocabulary for Emerson’s long-held faith in nature’s capacity for spiritual revelation.

Thus in his famous couplet “And, striving to be man, the worm/Mounts through all the spires of form,” Emerson reverses the trajectory of his Neoplatonic emanation. Nature is no longer “but an image or imitation of wisdom, the last thing of the soul,” but “A subtle chain of countless rings/The next until the farthest brings.” This metonymy of living forms traverses all of nature, is the “endless passing of one element into new forms, the incessant metamorphosis” he celebrates in “Poetry and Imagination.” Aware of it or not, Emerson repeats the “reversal” of Platonism effected by German Idealist nature philosophy, as culminating in Hegel. Nature no longer itself relies on an infinite degeneration from or expression of divine oneness, but is itself – immanently – the
process of the self-manifestation of spirit or mind from itself (Henrich 290). Emerson, by integrating Hegel, replaces an emanating idea of infinity with an immanent, living infinity (Henrich 92). He celebrates the Germans in his journal for precisely this:

I think the Germans have (a probity and) an integrity of mind which sets their science above all other. They have not their Science in scraps, this Science on stilts. They have posed certain philosophical facts on which all is built, the doctrine of immanence, as it is called, by which everything is the cause of itself, or stands there for its own, and repeats in its own all other, “the ground of everything is immanent in that thing”…Every thing is organic – freedom also, not to add, but to grow and unfold (JMN XIV: 72).

As Goethe likewise had shown Emerson, all is in all, and the whole is in every part. With this in mind, Gustav Van Cromphout asserts, “Goethe’s thinking…is hardly distinguishable from Hegel’s concrete universal (das konkrete Allgemeine), in which the universal is not separate from the particular…but instead constitutes with the particular a union informed by dialectical tension” (Van Cromphout 52). To this end Van Cromphout cites Goethe’s poems: “If you wish to refresh yourself in the whole, you must perceive the whole in the smallest thing” and “If you wish to stride into the infinite, just go into the finite in all directions” (90). All things interpenetrate in their mutual porosity, all things fall into all things, growing and unfolding out of each other.82 This immanent unfolding of nature becomes for Emerson the law of nature. Emerson astride the infinite, Emerson pursuing the finite in all directions.

4. The earth burns

Another elegant statement from “Poetry and Imagination” further illustrates Emerson’s sense of immanence, and even more intimately implicates Emerson within the German tradition:
The atoms of the body were once nebula, then rock, then loam, then corn, then chyme, then chyle, then blood; and now the be-holding and co-energizing mind sees the same refining and ascent to the third, the seventh, or the tenth power of the daily accidents which the senses report, and which make the raw material of knowledge. It was sensation; when memory came, it was experience; when mind acted, it was knowledge; when mind acted on it as knowledge, it was thought (CW 8: 313).

This “metonymy” draws into single succession several elements that would appear at first to be quite disparate – the nebular inorganic coldness of the dark matter of space is shown to be continuous with vegetative and animal life, which in turn finds itself consumed and transformed into digested fluids and blood, blood which rushes to the brain in the heat of thought, and becomes consummated as human self-reflection, sensation, memory and knowledge. Here, Emerson’s “spiritual food-chain” does not so much represent a temporal progression from primeval stardust to the thinking-action of the mind (or from lower animals up to humans). Its teleology is the self-manifestation of the fundamental unity of all nature – especially between matter and the mind. It is a study in their relationality. Emerson thus extends Goethe’s plant morphology across the patina of the physical universe, the finite in all directions. Not only does stem pass into bud, and bud into flower and leaf, but also all forms dynamically pass into all other forms, including the forms of matter into mind. All physical forms are the raw material of knowledge.

We could compare Emerson’s sequence to another strikingly similar one from the German tradition, from the 1778 text of the German post-Enlightenment thinker, Johann Gottfried von Herder, On the Cognition and Sensation of the Human Soul. Herder writes:

The plant consumes water and earth and purifies them up into parts of itself; the animal makes less noble plants into nobler animal juice; the human being transforms plants and animals into organic parts of his life, introduces them into the processing of higher, subtler irritations. Thus does everything purify itself up; higher life must come to be from inferior
life through sacrifice and destruction. Finally the deepest irritation, as it is mightiest hunger and thirst: Love!” (193).  

For Herder, like Goethe, the plant takes on a central role – in part to develop his theory of “vegetable genius” through the central analogy of the human to the plant. Here, each fundamentally “thirsts”: the plant for drawing in and purifying mineral-rich earth and water, the animal to convert these “less noble” plants into more noble “animal juices.” The human eats both and thus raises them together to “higher, subtler irritations” – the digested materials proffer, through the sacrifice and destruction of their own forms, a stronger, purified thirst for love. So “does everything purify itself up”: higher life arises from the persistent coming to be of all inferior life, which sacrifices itself and lets itself be destroyed. For Herder, self-sacrifice and destruction “get the juices flowing.”

Hegel, too, will echo this sequence; for him animal “subjectification” precisely occurs in the bile (or chyle), i.e. at the moment the plant sacrifices itself to its higher purpose as food for the animal. Digestion and absorption become the moment of plant’s becoming-animal. The plant’s passivity is annulled as it fuels the active, motile animal. As Hegel writes in the *Philosophy of Nature*, “Through this process of assimilation, therefore, the animal becomes in a real way for itself; for by particularizing itself into the main differences of animal lymph and bile in its behavior towards the individual thing itself it has proved itself to be an animal individual; and by the negation of its other, it has posited itself as a subjectivity, as real being-for-self” (Hegel 404). In a broader sense, Hegel’s presentation of nature as a dialectical unfolding of spirit out of the natural world, his program in the *Philosophy of Nature*, follows this structure of digestion. Like Herder (on whom Hegel’s reliance cannot be understated), Hegel renders each form or “stage” (stardust-rock-soil-plant-animal-mind) as sacrificed and destroyed for the next higher.
Instead of metamorphosis \textit{per se}, Hegel’s mechanism for the “evolution” of nature is the \textit{Aufhebung}, the formal preservation \textit{as} sacrifice, of matter to a higher stage. Matter is not “annihilated” so much as it is digested during the main course of the self-revelation of spirit. Or, as Derrida writes, “This assimilation acts as a kind of sublimated eating—spirit eats everything that is external and foreign, and thereby transforms it into something internal, something that is its own. Everything shall be incorporated into the great digestive system—nothing is inedible in Hegel’s infinite metabolism.”

Far from being merely “food for thought,” such passages resonate across Emerson’s later essays and lectures, and give us insight into how he understands the relationality of nature as immanent, and the place of the mind therein. In “Fate” (an essay in which Emerson explicitly names Schelling and Hegel) it is spiritual survival of the fittest: “The whole circle of animal life, – tooth against tooth, – devouring war, war for food, a yelp of pain and grunt of triumph, until, at last, the whole menagerie, the whole chemical mass is mellowed and refined for higher use” (\textit{CW} 6: 19). Elsewhere in \textit{The Conduct of Life}, in the essay “Wealth,” Emerson explains the movement of capitalism (the absorption and reinvesting of money) in digestive terms: “It passes through the sacred fermentations, by that law of Nature whereby everything climbs to higher platforms, and bodily vigor becomes mental and moral vigor. The bread he eats is first strength and animal spirits: it becomes, in higher laboratories, imagery and thought; and in still higher results, courage and endurance” (\textit{CW} 6:68). In his lecture “Perpetual Forces” (1862-1863), again Emerson pursues this metonymy, giving perhaps his most direct statement of the immanent, incessant natural force in which forms immolate forms:

The earth burns; the mountains burn and decompose slower, but as incessantly as wood in the fire…Plants consume the materials they want
from the air and ground. They burn or perpetually exhale and decompose their own bodies into the air and earth again. The animal burns, or undergoes this perpetual consumption…the Universe in a blaze…There is no loss only transference: when the heat is less here, it is not lost, but more heat is there (SL 284-85).

Through the slow burn of mountains, the self-exhalation of plants, the fire that consumes every animal from within, matter immanently self-sacrifices and refines itself. Emerson continues, drawing on the language of force he found in the physics of Michael Faraday:

These forces are in an ascending series, but seem to leave no room for the individual man or atom; he only shares them: he sails the way these irresistible winds blow. But when we arrive at man, we come to a new style and series, -- the Spiritual; Intellect and Morals appear only the material forces on a higher plane…The husbandry of force learned in the economy of heat, or light, or steam, or muscular fibre, applies precisely to the use of wit (SL 284).

If in “Poetry and Imagination,” Emerson sees the mind as the inexorable telos of nature’s relationality in which “each animal form serves as an inevitable step in the path of the creating mind” (CW 8: 10), here wit consummates this rising “economy of heat.” In the crucible of material forms, human intellect is neither only passively consumed nor only an active catalyst; Intellect and Morals draw on the force of the world, husband it, and put them to use. Intellectual and moral forces obey the same laws as those of physical forces, which suffuse us and which we must translate into action. For Emerson, the “force of Intellect” thus becomes a form of perception, a “seeing of the thoughts” that “pass through us” (285-6). We do not possess these forces; we turn them into labor, the labor which “hides in every mode and form” of the sensible world (287). Emerson solicits these powers of the mind to effect the transit from fate to freedom. Emerson often notes Hegel’s formula for this in his journals, “Liberty is the spirit’s realization of itself,” and in this context we can best hear Emerson’s own Hegelian formula: “intellect annuls
fate” (CW 6: 13). The power of the mind to free itself from the tyranny of fate is the culmination of nature; all of life becomes the celebration of this natural fact of intellect.

By offering a powerful picture of the dynamic philosophical and theological embodiment of nature, Hegel’s absolute idealism exacerbates Emerson’s lifelong intellectual departure from the dead philosophical forms of his forefathers. To be sure, Jonathan Edwards had also given an intricate picture of the mind as relational; but Edwards remained in the dualist, mechanistic universe of Lockean empiricist psychology and Newtonian physics. Likewise, the Platonism of Emerson’s youth – as evident in his use of Cudworth’s citation of Plotinus – though organically creative, maintained this dualism, holding separate corporeal matter from an eternal soul and mind from its immanent place in nature. By developing a creative organic notion of mind that not only receives the manifold sensations of matter, but is itself complicit in matter’s active construction, dissolution, and reconstruction, Emerson redefines the program of science. The program of science becomes to draw on the powers of the mind and to continue them. The force of Hegel’s thought endorsed this power of the mind as flux, as part of a world of multiple, living, evolving forms which impinge on and are impinged on by creative potential of the powers of the mind. They provided dramatic examples of how thinking can effect an organic reconnection of the space of thought to the space we are located in and ourselves structure.

Yet Emerson could never be counted as a Hegelian, as would the young Stallo, Conway, or Harris. His celebration of German metaphysics was never free of criticism for its pretense to a priori knowledge and system; thus he could never seek to incorporate it in toto. Emerson’s philosophical affinities remained with the poet-scientist Goethe,
who himself expressed horror at the “monstrous” implications of Hegel’s rational system of nature. This is evident already in “Experience” with Emerson’s formula, “Life is not dialectics,” a formula which Emerson will restate in various permutations even as his approach to Hegel was at its perigee. Thus Emerson’s late philosophical gesture, if imperfect, is towards those who throughout the course of the late-nineteenth and early-twentieth-centuries would come to “pluralize” Hegel’s thought, to break up its monism and open it back to life in all its fragmented multiplicity – there, where Goethe had found it.

5. The transit has not been made

So, despite all the assurances offered by gains in the sciences, despite the securities built into the Kantian system and the rearticulations of idealism in its wake, despite all the attempts by various Romanticisms (themselves inflected by Kantian thought) to integrate and elevate the natural world of human experience through writing, despite the concrete unity of mind and matter offered by Schelling and Hegel, and despite his own liberating break from the Unitarian theological tradition, there still remained for Emerson a disjunction in our knowledge of the world. As he famously said at the close of “Experience,” there is a “discrepance” between the “world I think” and the “world I converse with in the city and the farms” (491-492). This caesura will take on an even more central position in Emerson’s later thinking, which stays true to the claim that he “observes this difference and shall observe this difference.” It becomes evident in terms of a persistent ambivalence that accompanies Emerson’s celebration of German metaphysics, if not a nagging doubt that metaphysics generally has been able to
effectively bridge this gap between matter and mind, or world and thought. Although Emerson will both seek and at times insist on a one-to-one correspondence between mental and material substance, it is yet to be cast in shining terms such that all could see it. Metaphysics has not yet been able to speak to the everyday life of the man of the street; it has not yet been able to speak directly to Emerson’s central question from “Fate” for the *Conduct of Life* – “How shall I live?” In his 1858 lecture “Powers of the Mind” – a key text for understanding Emerson’s later thinking – he registers this as a lack in the “transcendent abilities” of these German metaphysicians, a failure to have found, despite what they might profess, “the hidden pass that leads from Fate to Freedom” (*SL* 235). As Emerson continues:

> the transit has not been made. ‘Tis like that crooked hollow log through which the farmer’s pig found access to the field. The farmer moved the log, so that the pig, in returning to the hole, and, passing through, found himself, to his astonishment, still on the outside of the field: he tried it once more, and was still outside: he then fled away with all his might, and would never go near it again. Whatever transcendent abilities Fichte, Kant, Schelling, and Hegel have shown, I think they lack the confirmation of having given piggy a transit to the field. The log is very crooked, but still leaves Grumphy on the same side of the wall he was before. If they had made the transit, common fame would have found it out (*SL* 235).

Emerson’s fable for the impasse of German metaphysics, although somewhat disappointingly couched in a discussion of “common fame,” is nonetheless not exactly the despair before the insoluble *aporia* of “Experience.” There Emerson, in noting the “discrepance,” attributed it to a failure in knowledge itself: “People disparage knowing and intellectual life, and urge doing. I am very content with knowing, if only I could know” (*Essays* 491). Since “manipular attempts to realize the world of thought” (attempts, that is, beginning with “practical action”) on the one hand, and equally a “paltry empiricism” which “prejudges the law” on the other, have either met with ridicule
or were “never a right endeavor,” the only option by the conclusion of the essay for Emerson is to patiently keep vigil for the “transformation of genius into practical power” (492). Yet in “Powers of the Mind,” as if in response to the conclusion of “Experience,” he makes clear that the “objection” to metaphysics “really lies against the manner of the study, and not the knowledge itself. It is one of those many things which require alternating with its proper counterparts. Metaphysics is dangerous as a single pursuit” (SL 237). That is, Emerson is not per se critical of all the epistemological advances of metaphysics (their “transcendent abilities”) – indeed these Germans have made headway into the problem of knowledge itself, headway which Emerson’s thinking will not fail to recognize and integrate. Instead he doubts their method for making thinking effective for our everyday life (the confirmation of piggy’s transit) – of which for him common fame would be evidence enough. German thought carries Emerson to this point: quite far, but not all the way. There still remains to be articulated a metaphysics that does not impose its system onto the world, but rather arises out of the world in all its fragmentation and multiformity. Not the “paltry empiricism” he decries in “Experience,” nor a detached metaphysics, but one that will find direct bearing in thoughtful life. He says this most clearly in a reprise of the above passage in “Success,” from Society and Solitude:

The fundamental fact in our metaphysic constitution is the correspondence of man to the world, so that every change in that writes a record in the mind. The mind yields sympathetically to the tendencies or law which stream through things and make the order of Nature; and in the perfection of this correspondence or expressiveness, the health and force of man consist….Aristotle or Bacon or Kant propound some maxim which is the key-note of philosophy thenceforward. But I am more interested to know that when at last they have hurled out their grand word, it is only some familiar experience of every man in the street. If it be not, it will never be heard of (CW 7: 301).
The contention here, then, is that Emerson will increasingly turn in his later thinking to natural science to articulate a notion of the mind that will close this non-coincidence between the world and thinking. It would be a notion in which the “mind yields sympathetically to the tendencies of law which stream through things and make the order of Nature.” For Emerson this is power: “All power is of one kind, a sharing of the nature of the world. The mind that is parallel with the laws of nature will be in the current of events, and strong with their strength. One man is made of the same stuff of which events are made” (Essays 798). Thus Emerson’s task, as he outlines it in Natural History of the Intellect, will be to “enumerate” the “laws and powers of the intellect” as “facts in a Natural History” (CW 12:3). This will involve an invitation to a different conception of metaphysics – a “new metaphysics” – a metaphysics as a “multiple pursuit,” that will draw on both the knowledge of German thought and the “reformed” physical sciences as its “proper counterpart.” As Emerson continues in “Powers of the Mind”:

We have reformed our botany, our chemistry, our geology, our anatomy, through the appearance of a several genius; but our metaphysics still awaits its author. A high analogic mind, a mind which with one aperçu penetrates many successive crafts, and strings them as beads on its thread of light, will charm us with disclosing mental structure, as the naturalist with his architectures. Now our metaphysics is like Kett and Blair (SL 239).

How Emerson proposes such an “author” might “charm us with disclosing mental structure” – and specifically what type of structure this might be – directly involves how Emerson understands “forms” (the beads) and their interrelationship (the thread of light, or later “invisible cords called laws”) as well as action of the intellect (the stringing). But before we unfold this program, we should first note that Emerson’s call for a new metaphysics, even though it seeks to depart from Kant, repeats the philosophical gesture
at the basis of his critical work. The gesture is that traditional metaphysics is suspect and therefore must be rebuilt from the ground up – if not torn down altogether. Indeed Kant sets as the labor of his *Critique of Pure Reason* to re-install metaphysics onto a secure foundation, to circumscribe it within a bounded geography of reason rather than leave it “an ocean without banks or ground” (*CPR* A236/B295). Yet, why is Kant’s reframed picture of metaphysics still insufficient for Emerson? Likewise why will Schelling’s idealistic, “poetic” approach to natural science – which in many ways seems most in sync with Emerson’s sensibilities – nonetheless also fail to effect the transit he seeks? How could Hegel’s all-encompassing system – which purports to precisely put the abstract, absolute mind in concrete unity with the becoming of the physical world, at the same time leave out for Emerson what is truest to life? Does Emerson, who was by his own admission a thinker averse to the conformities of systematicity, not fully gauge the depths of these metaphysical achievements?

To be sure, Emerson writes by the sword of his own poetic: he will take the thought of the philosophers he encounters, especially that of these German metaphysicians, as points of departure, not as final resting places. Thoughts or bodies of thought – including one’s own – are to be, as he says in “Intellect,” exhausted and left behind: “Who leaves all, receives more” (*Essays* 426). To engage a thinker, as Emerson says of Goethe, is to “honor” his or her “truth by use,” not to simply paraphrase or repeat verbatim his or her arguments – the antiquarian work many “philosophers” call philosophy. All too often Emerson scholars – as well as those who criticize or question his status as a philosopher – confuse the type of Emerson’s engagement with philosophy as a lack of engagement altogether, as if his claim that he “reads for the lustres” were a
wholesale retreat from philosophy. What is at stake, rather, is to understand the character of engagement Emerson calls for and seeks to enact in his own “science of the mind,” how such a science, as a new metaphysics, would differ from those that have failed to effect such “transit to the field.”

How Emerson presents his alternative program will demarcate the place of Emerson’s later thinking amidst the new milieus for American thought contemporary with it: Ohio and St. Louis Hegelianism, the Darwinian revolution, British materialism, scientific positivism/empiricism, psychology (as a stand-alone discipline), and, not least, the nascent pragmatism (which will in many ways synthesize elements from each of these). Against any single-minded metaphysics, Emerson’s proposed “manner” for a new metaphysics is a multiple pursuit – that will draw on each of these yet remain different because of its unique method of combination. We could call Emerson’s method an “analogical thinking,” which he adumbrates through an oft-employed topology: namely, as a stringing of beads. In this case, the sciences are strung “as beads on its thread of light” (much as natural laws are “invisible cords,” or as moods are strung in “Experience,” etc.). This multiple, metonymic stringing together involves a metamorphic notion of form(s), and thus, secondly, a dynamic, poetic, understanding of relation – one specifically focused on the process of knowledge as a putting-together of what is seemingly disparate. The beads and the string. The “reform” of botany, chemistry, etc. was primarily brought about by recognizing that each could be structured only through a “unifying” trope of metamorphosis – the sciences as set in motion. Botany through the bursting eye of the leaf; chemistry through the onrush of charged molecules into new affinities; geology through the tectonics of fluid rock; anatomy through the growth and
development of the organism. Science became the study of the becoming-other of matter to its adjacent-possible forms, an animate theory of nature, a science of life in all its multiformity. Any metaphysics must show identity to be likewise multiplied through constant repetitions of difference, the pervasive facts of change. Emerson gives us a hint of this in another key formulation from “Powers of the Mind”: “metaphysics must be perpetually reinforced by life; must be the observation of a working man on working-men, must be biography, a record of some law whose working was surprised by the observer in natural action” (SL 237). The question then, if apparently somewhat paradoxical at first glance, is what would be such a metaphysics of life? Nietzsche justifiably will come to criticize metaphysics as negating life – that any thought that attempts to go beyond life denies life. So here is the wager of Emerson’s new metaphysics: that it be a philosophy from out of life, immanent to life.

6. Dotting the fragmentary curve of Natural History of Intellect

From the outset of Natural History of the Intellect, Emerson’s explicit interest is to enumerate the “laws and powers of the intellect” as “facts in a Natural History.” In short, he seeks to provide a nomenclature for the “science of the mind” in the manner a naturalist would collect and classify natural facts or specimens – as a botanist, for example, might record the stamens and pistils of flowers. Yet since these powers and laws, as Emerson relates, occupy a “higher class of facts,” they at once “have a deeper interest and lie higher and are nearer to the mysterious seat of power and creation” (CW 12:4). As a result, Emerson finds nature “always working” in every science, “in wholes and in every detail, after the laws of the human mind” (CW 12:4). This leads Emerson to
a key reformulation of his idealism: namely, that “Intellect builds the universe and is the key to all it contains” (5). Yet this is not the pure idealism of Nature. Rather his method is to search in every creation its rhythm with the methods and means of our mind, how our thoughts find direct affinity, or a parallelism, with natural facts: “every object in nature is a word to signify some fact in the mind” (5). This posits the mind as both the instrument and object of his enquiry. Again we can note the influence of Stallo from the passage cited above: “The world exists not in its truth, unless it be through its organized intelligence, man, who is as it were, the eye which surveys itself.”

Emerson is thus at pains to record the qualities of mind without imposing onto them a rigid, predetermined metaphysical system: “I cannot myself use that systematic form which is reckoned essential in treating the science of the mind…I might suggest that he who contents himself with dotting a fragmentary curve, recording only what facts he has observed, without attempting to arrange them within one outline, follows a system also” (CW 12: 11-12). This “fragmentary curve” becomes tantamount for Emerson to a “New Metaphysics,” albeit one whose work is not to create another detached abstract system, but rather to produce “anecdotes of the intellect,” “a Farmer’s Almanac of mental moods,” a “true reporting” of the intellect’s “play in natural action” (11). This underscores Emerson’s continued philosophical interest in the ordinary – in encountering things as wholes, where they lie, in their movement and multiplicity. This includes the “watching of the mind, in season and out of season,” but undertakes to do so as a poet might, not as the “cold and bereaving,” “surgical” or “analytic” metaphysician. Although he is skeptical of metaphysics, he does not pronounce its end, but works to give it a revivified, or revivifying form. “Metaphysics must be perpetually reinforced by life…My
metaphysics are to the end of use” (13). He wants to “domesticate” the laws of the “wonderful power” of the mind and nature. The poet is the most capable of this domestication, of molding a plastic form to suit it, of being its first instructor: “I think philosophy is still rude and elementary. It will one day be taught by poets. The poet is in the natural attitude; he is believing; the philosopher, after some struggle, having only reasons for believing” (14). The poet draws on the source of action without the “obstructions” which practical, academic, or systematic forms impose, including the pretension of having a closed, unified system. Emerson’s program in the text, though more ambitious, is also more humble: “What I am now to attempt is simply some sketches or studies for such a picture; *Memoires pour servir toward a Natural History of Intellect*” (15).  

To develop this “natural history,” it is not surprising that Emerson chooses “Intellect” – a charged term in his thinking from his early essays. (That Emerson also referred to his project as the “Natural History of Spirit” further implicates him in the German line, if indeed he is playing on the untranslatability of *Geist* as implying both “mind” and “spirit.”) To elaborate what this could mean, he initially subdivides the task into three parts: 1) to speak of the “excellence” of the intellect as well as the “societal impediments” to its fullest realization; 2) again, to “treat the identity of the thought with Nature”; and, 3) to “proceed to the fountains of thought in Instinct and Inspiration.” The first of these deepens his description of Intellect proper, thus providing an evocative picture of the fluid mind. Intellect is an “ethereal sea,” before which “every human house has a water front”; thought finds us (as William James will soon similarly refer to consciousness) on the “bank of a river” whereby we “watch the endless flow of the
stream, floating objects of all shapes, colors and natures” – curiously we are not in the stream, we can merely run beside them a “little way along the bank” (16). Emerson echoes the questions he asked in the essay “Intellect”: “Who has found the boundaries of human intelligence? Who has made a chart of its channel or approached the fountain of this wonderful Nile?” (16). Further, Intellect is a “science of degrees.” It descends the “steep stair” from the “essence of Intellect pure” to our everyday “thoughts and intellections”; it detaches thoughts like earths and moons orbiting the “first mind” (17). These descriptions suggest a lingering neo-Platonism, but also index to a sort of Emersonian “world-spirit”: “detached thoughts,” the “perceptions of the soul,” pass from mind to mind, they “incarnate themselves into action, to take body, only to carry forward the will which sent them out” (18). “Nimble,” they pass through the materials of the earth (wood and stone and iron), and the “ponderous instrumentalities” of the world (such as cities and nations, armies and institutions, laws and religions, men and ages) (18-19). This structure suggests an Emersonian genealogy of thought-movements, a series of metamorphoses through which each thought “buries it-self in the new thought of larger scope.” (Restated later as the “every new thought modifies, interprets old problems”). This implies a dynamic “chain of being” of related thoughts, an animated natural classification of the Intellect.

This “appetite of the mind to arrange its phenomena” (19) is further developed and “made useful” in Emerson’s subsequent remarks on the identity, or unity, of nature and mind. Mind “reappears to us in our study of nature…therefore our own organization is a perpetual key, and a well-ordered mind brings to the study of every new fact or class of facts a certain divination of that which it shall find” (20). Or later, “From whatever
side we look at Nature we seem to be exploring the figure of a disguised man. How obvious is the momentum of our mental history!” (23). (Here, Emerson again relies on fluid analogies to describe the mind, with particular affinity to his familiar organic and botanical ones. This is most elaborately stated in what is a central passage of the text, and one that evidences continued proximity to German thought, specifically its notion of “vegetable genius”:

The idea of vegetation is irresistible in considering mental activity. Man seems a higher plant. What happens here in mankind is matched by what happens out there in the history of grass and wheat. This curious resemblance repeats, in the mental function, the germination, growth, state of melioration, crossings, blight, parasites, and in short all the accidents of the plant. Under every leaf is the bud of a new leaf, and not less under every thought is a newer thought. The plant absorbs much nourishment from the ground in order to repair its own waste by exhalation, and keep itself good. Increase its food and it becomes fertile. The mind is first only receptive. Surcharge it with thoughts in which it delights and it becomes active. The moment a man begins not to be convinced, that moment he begins to convince (CW 12:24).

Emerson’s idea of mental activity in its relation to nature, and the type of “history” his natural history of the intellect entails, is thus one of organic growth and development and, again, plants him in the lineage of vegetative thinkers: Herder, Goethe (implicitly cited in the passage), Hegel, Sampson Reed, Thoreau and Whitman. The vegetative mind, as we adumbrated earlier in the context of Herder and Hegel, is for Emerson not merely receptive or wholly active, but digestive: “A mind does not receive truth as a chest receives jewels that are put into it, but as the stomach takes up food into the system. It is no longer food, but flesh, and is assimilated. The appetite and the power of digestion measure our right to knowledge...As soon as our accumulation overruns our invention or power to use, the evils of intellectual gluttony begin, - congestion of the brain, apoplexy and strangulation” (33). That the mind is only at first receptive and then, as “surcharged
with thoughts,” becomes active recalls the twofoldness of intellect that Emerson posits already in “Intellect”: namely the “intellect receptive” and the “intellect constructive.”

There, on the one hand, Emerson is quick to show that all “thought is pious reception…We do not determine what we will think. We only open our senses, clear away, as we can, all obstruction from the fact, and suffer the intellect to see” (Essays 419). On the other hand, the “intellect constructive” (one of Emerson’s clearest definitions of “Genius”) “produces thoughts, sentences, poems, plans, designs, systems. It is the generation of the mind, the marriage of thought with nature” (422). Put differently, in “Intellect,” it is the “conversion of all nature into the rhetoric of thought, under the eye of judgment, with a strenuous exercise of choice” (423). Emerson summarizes this twofoldness in what he calls the “law of intellect”: “It seems as if the law of intellect resembled that law of nature by which we now inspire, now expire the breath: by which the heart now drains in, then hurls out the blood, – the law of undulation. So now you must labor with your brains, and now you must forbear your activity, and see what the great Soul showeth” (420). The intellect is an inseparable couplet, a systole and diastole of the mind, its inhalation and exhalation, a breathturn of thinking. This duplexity of intellect – its undulation – complicates Stanley Cavell’s claim from his essay “Thinking of Emerson” that “Emerson’s most explicit reversal of Kant lies in his picturing of the intellectual hemisphere of knowledge as passive or receptive and the intuitive or instinctual hemisphere as active or spontaneous” (13). By Natural History of Intellect, Emerson grafts the vegetative model of mind he found in the German philosophy of nature, especially that of Goethe and Hegel, to this dual
movement. Rather than talk of the “great Soul,” he does so in terms of the history of grass and wheat and the eye of the bursting leaf.

This complication of Cavell’s picture is furthered as Emerson moves to consider the sources of our mental power (food for thought, presumably), which brings him to explore the “unknown country” of instinct and inspiration. Emerson again proposes a receptive-constructive duplet of instinct instead of the usual picture of instinct as merely a source of action. He provides several definitions for each: instinct is “potential wit” (CW 12:34), “a taper, a spark in the great night,” “the source of thought and feeling which acts on masses of men” (34). Like intellect generally, instinct ascends by degrees, such that inspiration is its “power excited.” Instinct begins “at the surface of the earth, and works for the necessities of the human being; then ascends step by step to suggestions which are, when expressed, the intellectual and moral laws” (35); instinct is “nature when it first becomes intelligent” (36). Culture, rather than cultivating instinct, deadens it; Emerson thus calls for a reinvigorated understanding of instinct and inspiration, and in so doing details their relationship to perception, sensation, will, Genius, aesthetics, science, and religion. Although each “remains a mystery,” each is not so much sealed-off to us as it is a fundamental source of the renewal of life. The inspired state is marked by its “incessant advance,” the advance of perpetual novelty, of the invention of means, of the expansion and variation of thought, of its “recruitment” with “relations to all Nature.” (On this basis, Emerson celebrates the inceptual thinkers, who like the poet, move past the restrictions of personality: “Lord Bacon begins; Behmen begins; Goethe, Fourier, Schelling, Coleridge, they all begin” (70). That these thinkers lie closest to the undulations of intellect and instinct posits them closest to the
intransigent mystery of life, the perpetual advance of the new which they draw on, assimilate, and pass forward.

Regardless of the success or failure of Natural History of Intellect, regardless of questions of the text’s authorship, or of the extent to which the synthesis of Cabot and Edward Emerson re-oriented it more towards a positivistic bearing, the “science of the mind” Emerson develops in the ongoing project of constructing his Natural History of the Intellect in any case offers a rich source-book for understanding the continued growth and activity of Emerson’s own mind. Natural History of Intellect culminates much of his earlier thinking on the relationship between mind and nature, in terms of natural science, intellect, perception, memory, aesthetics and religion. Emerson’s explicit concern to treat the intellect as a natural fact deepens his project of writing, as he says in his 1858 lecture “Powers of the Mind” (and repeats here) “a metaphysics perpetually reinforced by life.” This leads Emerson to undertake a “poetic,” or “analogical” (as opposed to analytical) appropriation of philosophical, natural historical, and literary sources – an appropriation which rather aspires to “write nature” according to the ideal of the “scientific poet” he found in Goethe among others. This marks his central concern with how to write his system, a concern that has added intellectual historical interest if we recall the growing influences of Hegelian philosophy, logic, and empiricism on American thought during the time of Emerson’s later writing. As we have seen, Emerson’s work importantly intersected with that of Hegel, yet Hegel could be said to embody the type of systematic philosophy Emerson resists in the name of poetry, spontaneity, and intuition. In one regard, Emerson anticipates the critiques of Hegel’s monism that William James, Peirce, and Dewey will level in the decades to follow. In another, we find Emerson struggling to
bring to bear a project whose proper scope and depth would demand the integration of the whole of nineteenth-century literary, philosophic, and scientific thought. In any case, it gives us a picture of later Emerson’s relationship to the thought currents of his time: Hegelianism, evolutionism, psychology, physics, and the emerging Pragmatist philosophy, all of which, like Emerson, were engaged in rewriting and reorienting the relationship of the mind and nature. For his part, Emerson devotes his philosophy of nature to understanding life and experience as we find it, to opening new, unrestrained – if incomplete – geometries of thought, free to follow the “vast curve” of things as they are.

7. Emerson’s *gaya scienza*

As we have seen, Emerson’s endemic distrust of systematic thinking (as that of Aristotle, Bacon, Kant, or Hegel) relies on the basis that any pre-ordained notion of relation cannot give a full picture of the mind in all of its movement and variation. Systematic completeness, for Emerson, imposes a pre-determined form onto sensible, intelligible reality; thus it limits possibility and limits life. But system does not impose itself onto life only as a grand, monolithic whole. Systematicity reveals itself as much in its gestures towards wholeness or completeness as it does by its method of understanding individual relationships. In other words, part of the problem for Emerson with system is that systems work in granular differences, individual relationships and correspondences, in moments of transition where clear relationships of identity are blurred. For Kant and Hegel, if differently, the question of (logical) “necessity” determines epistemologically how things are to be thought together. Emerson, though indebted to both Kant and
Hegel, resists the strictures of their notions of necessity by which such relations form into natural laws, if not laws of the mind. Relations are not to be fixed in advance but become constructed by the imagination and intellect in the midst of life. Key to Emerson’s thinking, then, is not only how and to what extent humanity can know the physical world, but also how human intellect effectively constructs or orders the world in which it finds itself implicated, at the crossroads of the real and ideal. Again this is the ongoing question throughout his work, and what he strives to articulate in *Natural History of Intellect*: namely the question of how “Intellect builds the world.”

The role of writing in this building is of key importance. Emerson’s writing seeks to be an alembic through which poetry, science, and philosophy are put to use to imaginatively distill the world, expand it and transform it. The writer is the stone pilot for the altar to the Beautiful necessity Emerson pictures in “Fate.” To write is a *poesis* of the copula of relation, and the creation of new relations. These include, if not valorize, the relations among the natural facts Emerson seeks to enumerate. Thus this philosophy calls for a fluid theory of perception that allows for an ongoing reciprocity between specific knowledge of such facts (objects or life-forms as they are encountered in their transient moments of transformation) and general (categorical) knowledge (laws that govern the processes of nature, the order of things). Such a perception would allow general knowledge to flower from particular natural phenomena.  

It is no surprise, then, that Emerson will develop such a fluid theory of perception through Goethe’s botany and perception-thinking. This theory, the keynote of his later thinking, is what he will call the “poetic perception of metamorphosis” in “Poetry and Imagination” and elsewhere (*CW 8:7*). The poetic perception of metamorphosis opens
a way of thinking that can proceed to “animate the last fibre of organization”; it is a
relational thinking in which relations are defined not so much in terms of fixed
quantitative proportions, but as living – poetic – interconnections of meaning. In “Poetry
and Imagination,” his fullest statement of how to rejoin poetry to science through these
interconnections, Emerson makes this explicit:

Science was false by being unpoetical. It assumed to explain a reptile or
mollusk, and isolated it, - which is hunting for life in graveyards. Reptile
or mollusk or man or angel only exists in system, in relation. The
metaphysician, the poet, only sees each animal form as an inevitable step
in the path of the creating mind (CW 8:10).

The poetic perception of metamorphosis is tantamount to a “poetic knowing,” as David
Robinson has elaborated in Emerson and the Conduct of Life, which is “fundamentally a
recognition that perception is connection, [and] strives not to isolate objects from each
other or the object of perception from the perceiving subject” (Robinson 192). As in
Goethe’s “Ingenious Turn of Phrase,” it is a thinking that is not separate from objects, but
evidences the existence of a “perfect Identity” or “parallelism between the laws of Nature
and the laws of thought” (CW 8:7). This bears on how questions of form and
metamorphosis shape Emerson’s conception of the analogic mind as he describes in
“Powers of the Mind.” The work of the analogic mind is perpetual, imaginative
classification – the work of intellect is in this way to build its universe, but always from
within its universe, the unity of poetic interconnectedness.

For Emerson even if this is an imaginative, analogic construction, it is not wholly
without its logic. In Natural History of Intellect, it is the “system” of “dotting the
fragmentary curve.” Or, as Emerson writes in “Poetry and Imagination”: “The poet has a
logic, though it be subtile [sic]. He observes higher laws than he transgresses.” Likewise,
“Poetry is the gai science. The trait and test of the poet is that he builds, adds, and
affirms. The critic destroys: the poet says nothing but what helps somebody; let others be distracted with cares, he is exempt” (CW 8:33). This opens a different idea of writing nature – writing nature becomes an ongoing imaginative ordering of the world. As Emerson will say, again from “Poetry and Imagination”: “All thinking is analogizing, the use of life is to learn metonymy. The endless passing of one element into new forms, the incessant metamorphosis, explains the rank of the imagination in our catalogue of mental powers. The imagination is reader of these forms” (CW 8:14). Imagination thus is not expelled from the realm of science; rather science depends upon the richness and “free play” of imagination as Kant and the post-Kantian Romantic tradition in both Germany and Britain continually emphasize. Emerson’s emphasis on imagination as the reader of forms evidences his continued proximity to Coleridge, who sees imagination in terms of an ordering or “esemplastic” unification (the transliteration of the term “Ins-Eins Bildung” he found in Schelling, and opposed to the “Fancy,” a “mere aggregating” power) (Coleridge 449).

In the same manner, Emerson again turns to Goethe as his model: “Science does not know its debt to imagination. Goethe did not believe that a great naturalist could exist without this faculty. He was himself conscious of its help, which made him a prophet among the doctors. From this vision he gave brave hints to the zoöologist, the botanist and the optician” (CW 8:10). Goethe’s morphology was not merely a scientific description, but drew on the protean power of imagination to, like Schelling, propose a philosophy of nature that would be the poetry of the mind, a poetry of genesis and of transformation. In the final analysis, even as Emerson’s later thought becomes fundamentally marked by thinkers of the unfolding of natural form – the myriad scientists and philosophers and
writers he calls upon and who call upon him – the “author” of the metaphysics he is waiting for will be a poet-scientist-thinker in the mold of Goethe. Goethe stands as Emerson’s representative “writer.” Not only does he protect the poetry and humanity from becoming lost in the statistical analyses of French tabulation, as Emerson writes in “Goethe; or, the Writer,” but also he inaugurates a writing reserved for those with the “higher degrees” or “splendid endowments” who can “see connection where the multitude see fragments, and who [can]…exhibit the facts in order…so to supply the axis on which the frame of things turns” (Essays 747). Such scholars will exhibit Goethe’s “superlative” abilities. As embodied observers, they will look from within nature at nature and themselves, an “organic agent” in what Emerson calls “the knitting and contexture of things” (748). Theirs will be a joyous science; they will become cheered by their “presentiments [and] impulses…[by] a certain heat in the breast which attends the perception of a primary truth, which is the shining of the spiritual sun down into the shaft of the mine” (748). In so doing, they will open new currents or conductivities of life, perpetually reorganizing and electrifying the grid of the possible. The poet-scientist-thinker probes the inner limits of each discourse, where each discourse approaches the other. The point of intersection of poetry, science, and philosophy becomes a point of mutual rupture – of entrenched presuppositions, terms, or relationships. It is the locus of a dynamic, creative thinking wherein our relationship with the world and the world itself is perpetually re-written, rethought, recreated and co-constructed. Such a thinking is for Emerson analogical, aversive, and inductive – it is the perpetual invitation of new life, out of life. It is a thinking that begins and is itself anticipation.
Chapter 3

“The maze of phenomena”: Perception and Particular Knowledge

in Thoreau’s Later Journal

What sort of science is that which enriches the understanding, but robs the imagination?...It would be a truer discipline for the writer to take the least film of thought that floats in the twilight sky of his mind for his theme – about which he has scarcely one idea...faintest intimations – shadowiest subjects – make a lecture on this – by assiduity and attention get perchance two views of the same – increase a little the stock of knowledge – clear a new field instead of manuring the old (4:222; 12/25/51).

Pliny says In minimis Nature praestat Nature excels in the least things--The Wellingtonia gigantea--the famous California tree, is a great thing; the seed from which it sprang, a little thing{.} & so are all seeds or origins of things. (MV33: 62; 01/14/61).

1. Slow are the beginnings of philosophy

A footnote from Kant’s Critique of Judgment can serve as a provisional entry point to the set of questions concerning perception and particular scientific knowledge that Henry David Thoreau will explore in his later Journal. While Kant’s sarcasm is certainly pointed at Linnaeus, he also gives a warning to those who would systematize nature on the basis of particulars:

One may wonder whether Linnaeus could have hoped to design a system of nature if he had to worry that a stone which he found, and which he called granite, might differ in its inner character from any other stone even if it looked the same, so that all he could ever hope to find would be single things – isolated, as it were, for the understanding – but never a class of them that could be brought under concepts of genera and species (Kant CJ 216’n24).

Kant is in effect questioning the objectivity of Linnaeus’s “artificial system” in which he “group[ed] individuals having the same appearance (for us) within the same species” (Huneman 5). Had Linnaeus questioned the inner character of every stone he found, even
if they all looked like the piece of granite he was holding in his hands, in Kant’s estimation he could have never constructed his *Systema naturae*. Thus Kant is here, as John Zammito in *The Genesis of Kant’s Critique of Judgment* shows:

> [warning] against [making] overhasty inferences from empirical observations to general principles…Linnaeus had fallen prey to error by taking the similarity of certain instances for a proof of the similarity of their fundamental principles. Such hasty generalization was not something a careful scientist permitted himself, but there were those ‘so indiscriminate as to read their ideas into their observations.’ Kant called such individuals ‘rash sophists [*rasche Vernünftler*] (210).\(^{101}\)

To be sure, one goal of Kant’s critical philosophy is to understand the *necessary* order of nature; for this reason he works to determine the *a priori* principles at the basis of all understandings of nature, principles that make understanding nature possible. This follows from his famous pronouncement that it is human understanding, not divine design or even nature itself that legislates natural laws. Without understanding the structure of human understanding, then, we cannot understand the structure of nature, and thus there could be no natural science. Although the ability to divide nature – “to bring it under concepts of genera and species” – does not therefore rely *per se* on empirical knowledge, Kant insists that nature has order even in its particular rules, which we can know empirically.\(^{102}\) In this sense, Kant does not dislocate the mind from the world,\(^ {103}\) but works to rigorously understand how the two are connected. Thus, as is the case here, he attempts to protect nature from those who would too easily or too hastily find fundamental principles for its organization. This is especially true, as he noted already in his *Critique of Pure Reason*, “if we bear in mind that in so great a multiplicity of things [as nature] there can never be much difficulty in finding similarities and approximations” (CPR A668/B696).\(^ {104}\)
Although we cannot develop with any responsible thoroughness Kant’s thought on natural history, nor the detailed conceptual matrix Kant introduces in order to understand particular phenomena,\textsuperscript{105} suffice it to say that, generally, Kant’s biological thought, often overshadowed by his earlier thought on physics,\textsuperscript{106} is of fundamental importance for understanding the Romantic conception of life that developed in his wake, a conception of life that fundamentally inflects American Transcendentalism.\textsuperscript{107} If not a direct reader of Kant, Thoreau inhabited the post-Kantian landscape which had integrated, if selectively, elements of Kant, Goethe, and German Naturphilosophie.\textsuperscript{108} More specifically, Kant provides a philosophical point of departure for understanding Thoreau’s approach to particularity.\textsuperscript{109} Like Kant’s careful scientist, Thoreau will seek to avoid hasty judgments concerning observed phenomena. As he will remark in his \textit{Journal}: “Ah give me pure mind – pure thought. Let me not be in haste to detect the universal law, let me see more clearly a particular instance” (4:223; 12/25/51). With Thoreau, one dwells with particulars. He works to cultivate a patient, “particularized” perceptual practice, to get to know the particular plants or animals or rocks or geographies of Concord and around through precise, careful observation.

For Stanley Cavell, this is a problem not only of perception but of knowledge as well. As he says of \textit{Walden}: “[e]pistemologically,] its motive is the recovery of the object, in the form in which Kant left that problem and the German idealists and Romantic poets picked it up, viz., a recovery of the thing-in-itself; in particular, of the relation between the subject of knowledge and its object” (95). The \textit{Journal} project can be understood as both an extension and transformation of this relationship, and one which foregrounds the particularity of objects, how they are perceived, how they are
understood scientifically and poetically. As such, Thoreau’s emphasis shifts from the “recovery” of the object to its relationality, especially in terms of the approach to the object, to what occurs in the “transjective” interspace of subject-object as the relationship to the object becomes perceptible. In a central passage from November 1857, Thoreau thus restates the problem:

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 of you, and not as it is related to you. The important fact is its effect on me. He thinks that I have no business to see anything else but just what he defines the rainbow to be—but I care not whether my vision of truth is a waking thought or dream remembered – where it is seen in the light or in the dark – It is the subject of the vision the truth alone that concerns me. The philosopher for whom rainbows &c can be explained away, never saw them. 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) (MV24:609; 11/5/57).

For Thoreau, in the dynamic, relational space between subject and object it is not only that the object must conform to our knowledge (as the Copernican turn insists), but also that our knowledge must acknowledge the resistant thingness of objects. Thus, this “somewhere between” becomes of fundamental importance. As we will see, it comes to rhyme with what Thoreau calls the poetic “interval” between “impression and expression” (3:331; 07/25/51). It becomes the “near-far” space of embodied, multiple perception. 111 Cavell himself details it as a “perpetual nextness,” as the “claim” that the natural world of particulars exerts on us and to which we respond. So even if we might stand back a little from Cavell’s assertion that “Walden, in effect provides a transcendental deduction for the concepts of the thing-in-itself and for determination – something Kant ought, so to speak, to have done” (Cavell 95), we will follow Cavell’s
understanding of how Thoreau prompts us to rethink our approach to objects, how we come near to them and hold back before them – how we dwell with particulars.

Already by his early essay “Natural History of Massachusetts,” Thoreau posits slowness as essential to the dual enterprise of science and philosophy, a slowness necessary for a “fact” to “flower in a truth”:

Let us not underrate the value of a fact; it will one day flower in a truth. It is astonishing how few facts of importance are added in a century to the natural history of any animal. The natural history of man himself is still being gradually written…You cannot go into any field or wood, but it will seem as if every stone had been turned, and the bark on every tree ripped up. But after all, it is much easier to discover than to see when the cover is off. It has been well said that “the attitude of inspection is prone.” Wisdom does not inspect, but behold. We must look a long time before we can see. Slow are the beginnings of philosophy. He has something demoniacal in him, who can discern a law, or couple two facts (Collected Essays 41).

In “Thursday” from A Week on the Concord and Merrimack Rivers, Thoreau further details the importance of patience in encountering objects, and in so doing explicitly links this patience to the writing of nature. There, he surmises, “[a] true account of the actual is the rarest poetry, for common sense always takes a hasty and superficial view” (265-266). To make this point, Thoreau turns, as Emerson had in Representative Men, not to Kant but to Goethe as his model:

Though I am not much acquainted with the works of Goethe, I should say that it was one of his chief excellences as a writer, that he was satisfied with giving an exact description of the things as they appeared to him, and their effect upon him. Most travelers have not self-respect enough to do this simply, and make object and events stand around them as centre, but still imagine more favorable positions and relations from the actual one, and so we got no valuable report from them at all. In his Italian Travels Goethe jogs along at a snail’s pace, but always mindful that the earth is beneath him and the heavens are above him…He speaks as an unconcerned spectator, whose object is faithfully to describe what he sees,
and that, for the most part, in the order in which he sees it. Even his reflections do not interfere with his descriptions (A Week 266).

As such, to make a “true account of the actual” is not simply to report the real, nor to indiscriminately read one’s ideas into his or her observations. Rather it is to see the world directly before us with the “cover off.” It is to distill this world – not by haste and superficiality – but through slowed processes of seeing which act as counterforce to the fast complacencies of common sense. Like Kant, Thoreau will seek to avoid the “rash sophistry” of uncareful science and thus to protect individual natural forms from “unnecessary” generalization. Like Goethe, he will endeavor to jog at a snail’s pace, to stay mindful of the earth beneath him and the heavens above him, to describe objects faithfully where he finds them – as for example along one of his walks. He follows the poet-scientist Goethe to the crossroads of the real and the ideal. As in Emerson’s later thought, the “place of the mind” in Thoreau’s work then does not merely refer to superficial aspects of geographical location, but to a slow thinking into place in which place and mind become intimate, and perception becomes active and embodied. Thoreau too is devoted to the “facts” of natural science and works to put them on a material basis. Thus he turns away from his earlier idealism and neo-Platonism, towards a broad, precise reckoning with the physical becoming of phenomena. In this way, he could be said to exacerbate Emerson’s latter day movement in the same direction.

Yet, unlike Emerson – and perhaps in a way somewhat closer to Goethe’s (and as we will see Alexander von Humboldt’s) – Thoreau develops this relationship towards specific individual natural phenomena (and their complex interrelationships and metamorphoses) in terms of a carefully executed science. This becomes increasingly the case after an intense period of study of Linnaeus, Cuvier, Gilbert White, Humboldt,
Evelyn, Bartram, Agassiz, Asa Gray, and Darwin during the early 1850’s.\textsuperscript{116} After the publication of \textit{Walden}, his commitment to observing, collecting, cataloguing, and interpreting natural phenomena became an end in itself, the “literary expression” of which is his open form, open-ended \textit{Journal} project. No longer would Thoreau “mine” his \textit{Journal} for the material of his essays and books; the \textit{Journal} became a stand-alone work, one situated directly within the natural facts from which it drew its source and structure:

I do not know but thoughts written down thus in a journal might be printed in the same form with greater advantage – than if the related ones were brought together into separate essays. They are now allied to life -- & are seen by the reader not to be far fetched – It is more simple – less artful – I feel that in the other case I should have no proper frame for my sketches. Mere facts & names & dates communicate more than we suspect (9:459-460; 01/27/52).

As “allied to life” – and specifically, if complexly, allied to his own life – the \textit{Journal} becomes Thoreau’s \textit{modus vivendi}. It marks the natural processes he witnesses and those that suffuse him and shape him. As was the case with \textit{Walden}, this involved a detailed inventory of the “essential facts of life” which he undertook to do by a “perpetual instilling and drenching of the reality that surrounds us” (\textit{Walden} 399). The key difference is that the method of the \textit{Journal} will be not to condense this material into an ordered narrative, but to let it gradually expand out of its own situatedness. The most striking example of this would be the detailed phenological charts in the \textit{Journal} referred to as the “Kalendar,” in which Thoreau marked annual similarities and dissimilarities in the flowerings of phenomena.
As such, he sets as his task to get know this situatedness. Nature becomes a neighbor he seeks to know: “I seek acquaintance with nature –, to know her moods and manners – Primitive Nature is the most interesting to me” (MV20:423; 03/23/56).

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 (MV22:111; 12/04/56).

Or, again, the following year: “I am interested in each contemporary plant in my vicinity, and have attained to a certain acquaintance with the larger ones. They are cohabitants with me of this part of the planet, and they bear familiar names – Yet how essentially wild they are – as wild really as those strange fossil plants whose impressions I see on my coal” (MV23:117; 06/05/57). They cohabit not only his “part of the planet” but the wild textual expanse of the Journal as it increasingly opened before him throughout the 1850s and early 1860s.

But it takes a long time to get to know your neighbors, to get to know their names and their moods, their manners and their language: “Here I have been these forty years learning the language of these fields that I may the better express myself” (MV23:644-45; 11/20/57). Nine months later he writes:

I have known a particular rush, for instance, for at least twenty years, but have ever been prevented from describing some [of] its peculiarities, because I did not know its name nor anyone in the neighborhood who could tell me it. With the knowledge of the name comes a more distinct recognition and knowledge of the thing. That shore is more describable, more poetic even. My knowledge was cramped and confined before, and grew rusty because not used, for it could not be used. My knowledge now becomes communicable and grows by communication. I can now learn what others know about the same thing (JXI: 137; 08/29/58).
To be sure, the open form of the Journal befits such slow learning. It defers any resolution in how to perceive the world, allowing each new perception the potential to revise previous perceptions, or developed categories for knowing. It respects the resistance of things and thus holds back before any universal law to open instead to our view new patterns of phenomena, to reveal incipient worlds of relation unfolding from our familiar world. This is the “constant endeavor...to get nearer and nearer here” (XI: 273-75).¹¹⁷ This is the rarest poetry.

2. The maze of phenomena – locating the Journal

Insofar as the collectivity of nature becomes coextensive with the Journal, the relationship between distinct or partial phenomena and the “whole” of nature, then, becomes not just another scientific or philosophical issue elaborated in the Journal. Rather, it determines the Journal’s structure and poetics, and thus conditions our interpretations of it. As Sharon Cameron asserts in Writing Nature, “the question of how part of a phenomenon is related to the whole of that phenomenon – is not just the Journal’s practice; it is often the Journal’s subject” (Cameron 10). To be sure, the relationship between particular knowledge and the structure of the Journal has been well-attended to in recent scholarship;¹¹⁸ at the same time, despite Thoreau’s advertisement of the Journal as “more simple – less artful” there has not been precise agreement as to how to characterize this structure. H. Daniel Peck, for example, in Thoreau’s Morning Work, sets as the Journal’s key figure the “fluid reciprocity” between general (categorical) knowledge and particular phenomena: “The fluid reciprocity between Thoreau’s evolving categories and the particular images that find their place within them is one of the most
prominent aspects of the Journal as a work of art” (Peck 85). In Seeing New Worlds, Laura Dassow Walls, instead of a fluid reciprocity, characterizes the structure of the Journal in terms of “non-repeating but patterned” phenomena. The “recursive project” of the Journal becomes to connect, reconnect, or transcribe the inherent connectivity of these phenomena – the “facts” which Thoreau daily records (Walls 227). Even if its meaning remains unresolved, the project is still, in her estimation, oriented towards a meaning to come, towards “reveal[ing] a pattern at last” (227). To this end, she significantly allies Thoreau to the “empirical holism” of Humboldt who worked inductively from isolated facts to demonstrate nature as “a Cosmos, or harmoniously ordered whole, which dimly shadowed forth in the human mind in the primitive ages of the world, is now fully revealed to the maturer intellect of mankind as the result of long and laborious observations” (Cosmos I: 24; Richards 520). Although nature is a structured whole, Humboldt’s empirical holism (in contrast to “rational holism”\textsuperscript{121}) approaches its totality not as \textit{a priori} but on the basis of individual phenomena or empirical facts that become enchained into an infinitely expansive idea of the universe. By locating the Thoreau of the later Journal with this “emergent alternative” of Humboldt’s empirical holism, Walls extends (and to a certain limited extent legitimizes) Cavell’s claim that Thoreau’s difference from Kant in Walden is that \textit{“a priori} conditions are not themselves knowable \textit{a priori}, but discovered experimentally” (Cavell 95) – a claim which Peck works to show via his notion of “category.”\textsuperscript{122} Thus, she asserts, “Thoreau saw his task to be the joining of poetry, philosophy, and science into a harmonized whole that emerged from the details of particular natural facts”; and, in turn, via Humboldt, “Thoreau 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” (Walls 4-5).\(^{123}\) In other words, the *Journal* becomes structured like a vast, multi-faceted longitudinal study of interconnected particular phenomena that does not so much represent phenomena, as allow them to present themselves to us anew, where they lie, in their essential connectivity. This does not sacrifice the organicism of rational holism so much as integrate it into an experimental (or “recursive”) discourse that pushes natural description to a liminal point where philosophy, poetry, and science can converge into a harmonious whole. The writer emerges not as the sole agent of perception or connection, but as another perceiver or connector interlinked in the chain of connections (Walls 140).\(^{124}\)

David Robinson, in his *Natural Life: Thoreau’s Worldly Transcendentalism*, draws on Walls’ terminology of empirical holism to further describe the *Journal* in terms of the relationality of particular natural facts. For Robinson’s Thoreau, “one could know a thing completely only through the larger network of phenomena in which it played a part” (178). The *Journal* thus becomes “a comprehensive theory of the process of nature’s variation and development” (177). Robinson likewise positions Thoreau as straddling the empirical and ideal, such that “[Thoreau’s] increasing mastery of empirical observation merged with a still vibrant philosophical idealism and a continuing appreciation of the poetics of nature” (201). Robinson places key emphasis on perception in Thoreau’s work as a participation in these natural processes – in which processes of writing are complicit. The poet “is more than an observer of the process of seasonal change; he is a participant in them” (29); “the poet does not just observe and feel the
evidence of the fall; he recapitulates its nature in his own processes of thought and emotion” (30).

Cameron, in contrast to these readings, suggests that: “Thoreau’s idea of totality is…predicated not on connections but on breaking connections. In fact, discontinuity could be described as the Journal’s dominant feature, for no thought is ever entirely separated or jointed to any other thought” (6). Cameron cites Thoreau’s Journal entry from March 24, 1857 to bolster her point: “If you are describing any occurrence…make two or more distinct reports at different times…We discriminate at first only a few features, and we need to reconsider our experience from many points of view and in various moods in order to perceive the whole” (IX: 300-301). Cameron in this way demonstrates that our relation to the particular – and therefore our perception or experience of it – is intrinsically multiple. Any perceptual instant, then, is not so much a converging of these perspectives into a singular event of knowing, but rather a temporally diffuse moment given to various moods. Thoreau’s thoughts recorded in the Journal, as a consequence, occur at intervals, intervals which may touch but never fuse. The work itself takes on this poetic architectonic of disconnection.

To be sure, Cameron, Walls, Robinson, and Peck each provide a figure for what goes on in the encounter-space with a particular phenomenon, and how we find ourselves at once implicated in its systems of relation. Amidst these readings, we will stake out a position that accommodates both the connectivity and discontinuities that Thoreau brings to our attention throughout the Journal. This is to emphasize the collectivity of nature, as a drawing together of disparate-yet-related particulars. Our work will be to better understand how Thoreau undertakes throughout the Journal to dwell within this
collectivity, and what this can mean for our own being in the world. As each commentator in his or her own way implies, this involves how Thoreau envisages the possibilities for how science and poetry can relate. It is the contention here that it is out of this relationship of poetry and science — a relationship as often tense as it is harmonious — that the *Journal* unfolds, and that systems of natural relationship become realized. For Thoreau our mode of living in the world can become fundamentally transformed if we let science and poetry conjointly teach us how to perceive natural phenomena. Thus as Thoreau’s interest in science increased throughout the 1850s, so did his sense of the power of poetry to express the expansive system of relations which science revealed to him. At the same time, poetry and science mutually expose each other’s epistemological blind spots. To paraphrase Emerson, any science that did not account for the fullness of these relations could be held false by its being “unpoetical” (*CW* 8:10), and any poetry that did not attend to the physical facts of life would be an empty idealism.

As Thoreau’s attention to particular phenomena increased, so did his awareness of the problems particular knowledge posed for how we understand science and natural description. On the one hand, he realized that attention to detailed specific knowledge could narrow the scope of knowledge. He registers this already in a *Journal* entry from August 1851, in which he writes, somewhat apprehensively anticipating the work he would undertake throughout his final decade:

I fear that the character of my knowledge is from year to year becoming more detailed and scientific; that, in exchange for views as wide as heaven’s cope, I am being narrowed down to the field of the microscope. I see details, not wholes nor the shadow of the whole. I count some parts and say “I know” (3:380: 08/19/51).
There is in this passage almost a palpable lament: that without the even the shadow of the whole to orient particular knowledge, we are left with only partial, incomplete knowledge. Does intense local knowledge condemn one to the backcountry of thought, in which one can never realize the true scope of its territory? Does particular knowledge risk repeating the dangerous assumption at the center of the Linnaean system, the generalization of knowledge or systematicization of nature out of its parts? What does this mean for the process of journal writing as Thoreau now conceived it? – i.e., would too close attention to details obscure its larger framework?

On the other hand, as he became implicated in the details of Concord’s natural life, he felt the danger of becoming overwhelmed by their sheer number, of being lost in the maze of myriad phenomena. As Kant warned, nature can be “infinitely diverse and [thus] beyond our ability to grasp (CJ 185). Nature in its vast swell of particulars exceeds knowledge, rendering it again partial or incomplete. As Thoreau reports on June 7, 1851, “I wonder that I even get 5 miles on my way – the walk is so crowded with events and phenomena” (3:245). Or, looking back on the increasingly detailed and scientific character of his thought some years later he writes:

I remember gazing with such interest at the swamps about those days and wondering if I could ever attain to such familiarity with the plants that I should know the species of every twig and every leaf in them…Though I know 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 (MV22:110-111; 12/04/56).

Despite his familiarity with some of the plants of the swamp, it remains a world overflowing with particulars, a maze “of a thousand strange species.” We are blinded by the surfeit of phenomena: “How much of beauty—of color, as well as form—on which
our eyes daily rest goes unperceived by us” (MV32: 20; 8/1/60). Thus how we encounter the particular is bound up with how we can perceive it within its “tangled bank.” For Thoreau, a frequent visitor to swamps and other wild, overgrown “oases,” to attain the level of specific knowledge he desires, to make sense of the maze, demands that it be “faithfully and laboriously” looked “through.” As Thoreau will say in a journal entry from November 1, 1858, “Only the rich and such as are troubled with ennui are implicated in the maze of phenomena. You cannot see something until you are clear of it” (MV27: 294; 11/01/58). To see our way out of the enfolded immensities of nature requires a doubling and distancing of sight (as Thoreau will also say in Walden). It is a type of perception that is no mere looking, but an active, enactive perception that patiently pulls apart the tangle of particulars around us. Perception becomes the ongoing work of making ever new our seeing – and ever new our familiar self. And as part of perception’s ongoing work, its doubling and distancing, writing allows us to put some spacing between phenomena, to make a clearing in the crowded grammar of the world.

Thoreau’s interest in the swamp not only underscores the systematic, if not obsessive task he lays out for himself to specifically know his locality; it also reiterates his belief that modern scientific knowledge alone is inadequate for informing one’s experience of the world. The experience of particular phenomena, unless directly experienced, for Thoreau is not yet true, not yet to be trusted. Already by A Week he writes:

Each man can interpret another’s experience only by his own…We read that Newton discovered the law of gravitation, but how many who have heard of his famous discovery have recognized the same truth that he did?…Much is said about the progress of science in these centuries. I should say that the useful results of science had accumulated, but that there had been no accumulation of knowledge, strictly speaking, for
posterity; for knowledge is to be acquired only by a corresponding experience. How can we know what we are told merely?” (296).

For Thoreau, then, each experience “continually negotiate[s] the vexed relationship between seemingly individual, embodied experience and scientific knowledge.” This points to a certain endemic failure in – or short-sightedness of – scientific knowledge, and one that conditions Thoreau’s approach to science. For Thoreau, as well as others like Merleau-Ponty in the twentieth-century, scientific knowledge without embodied experience of the world cannot embrace the world in its fullness. Any acquisition of knowledge through a corresponding experience begs the question of how we are to physically encounter the particular, of how to recognize it in its specificity, of how to perceive it in its relations. Any seeing clearly of a phenomenon in the instance of its particularity relies on a perceptual restraint which holds back from expressing it in terms of a universal law. Any “search for larger symmetry” in the world depends on how we perceive the correspondences, likenesses, or relations in which a given particular is enfolded, without becoming lost in the maze of phenomena (seeing no connections), or finding similarities and approximations all too easily (seeing connections everywhere).

It depends on our mood, on the interest and attention we invest and allow ourselves to invest in order for things to become familiar to us – familiar enough that we can see them change and become unfamiliar and new. We rediscover the world in each instance of perceiving the world, in each moment of our dwelling in the world.

Science can only lead us towards such rediscoveries, but never wholly afford them to us. We need to be aware, attuned to the world, ready for it. Without such awareness, direct experiences cannot occur at all. We can be right before objects, but still not see them, their beauty unperceived. As he writes in “Autumnal Tints”: “Objects are
concealed from our view, not so much because they are out of the course of our visual ray as because we do not bring our minds and eyes to bear on them. A man sees only what concerns him” (Collected Essays 393). Or, from a related Journal passage: “[A]s much beauty visible to us in the landscape as we are prepared to appreciate,—not a grain more. The actual objects which one person will see from a particular hilltop are just as different from those which another will see as the persons are different.” Thoreau continues, in a way that complicates any easy characterization of him as an empiricist:

We cannot see anything – unless we are possessed with the idea of it – & then we can hardly see anything else. In my botanical rambles – I find that first the idea or image of a plant occupies my thoughts though it may at first seem very foreign to this locality –& for some weeks or months I go thinking of it –& expecting it unconsciously –& at length I surely see it & it is henceforth an actual neighbor of mine. This is the history of my finding a score or more of some plants which I could name (MV27: 308-309; 11/4/58).

Elsewhere, Thoreau casts this in strikingly epistemological terms: “We hear and apprehend only what we already half-know. If there is something which does not concern me, which is out of my line, which by experience or genius my attention or genius is not drawn to, however novel and remarkable it may be, if it is spoken, we hear it not, if it is written we read it not, or if we read it, it does not detain us” (JXIII: 77; 01/05/60). As François Specq has shown in commenting on this passage, this “half-knowledge” is not ignorance, but a type of knowledge that is preparatory – that prepares us for an encounter with phenomena (45). We must prepare ourselves to see by cultivating our attention. Although it is perhaps curious that here (and in a series of other passages throughout the Journal) Thoreau often expresses an ambivalence, almost wariness towards novelty, we must keep in mind that the emphasis for Thoreau is to see what has been before us all along, but with clearer sight. Not to discover, but to see with the cover off. To grind our
perceptual lenses, so many Spinozas, to a refined exactness. Clarified seeing is the dominant theme in his considerations on perception in *Walden*: “It is something to be able to paint a particular picture, or to carve a statue, and so to make a few objects beautiful; but it is far more glorious to carve and paint the very atmosphere and medium through which we look” (*Walden* 394). Throughout the *Journal* it becomes joyfully refracted in the manifold manifestations of the particular.

3. Thoreau’s unmeasured poetry

So if Kant will critique Linnaeus’ system on the basis that it makes an “overhasty inference from empirical observation to general law,” for Thoreau the problem becomes determining the manner in which we are to dwell with particulars. Certainly Linnaeus’s “artificial system” of naming individual phenomena, including the sexual parts of plants, provided Thoreau with a guide for his own botanical experiences. But even the most detailed field-guides cannot prepare us for the strangeness of an immersion in particulars. Whereas both the system of Linnaeus as well as the “natural” system of John Ray rendered more clearly the relationship between plants, as Thoreau surmised, the task “still remains to learn their relation to man – The poet does more for us in this department” (4:353; 02/16/52). The poet, like the taxonomist, is a namer, who within every taxonomy or toponymy embeds a multiplex of implicit relations, a series of braided metonymies. Unlike Linnaeus, however, for Thoreau the poet-scientist will not understand names as markers for an all-encompassing theory of nature, one that will then inform all subsequent perceptions; the poet’s task as namer is to put things perceived in relation to
humanity, to detect new significant patterns in the metonymic dispersion of things, in which humans are themselves dispersed.

Science, although it offers specific knowledge about phenomena, severs knowledge from the world of living relations. Thus Thoreau laments when he kills a small turtle called a cistudo that “such actions are inconsistent with the poetic perception, however they may serve science, and will affect the quality of my observations” (VI: 452). Through poetic perception we dwell with particulars, in the affinitive web of living relations in such a way that these relations can become significant. Put slightly differently, poetic perception becomes a mode of active, imaginative co-creation and co-communication of and with the living world. It becomes a means to reconnect the scientific observation of phenomena to its human significance, a task to which scientific perception alone is inadequate, if not blind.

One sentence of Perennial poetry would make me forget – would atone for volumes of mere science. The astronomer is as blind to the significant phenomena – or the significance of phenomena as the wood-sawyer who wears glasses to defend his eyes from sawdust – The question is not what you look at – but how you look & whether you see” (3:354-355; 08/05/1851).

“Mere” science fails to see the connectedness of the object to the full extent of living relations. On this basis alone it cannot provide an adequate “description” of a phenomenon, despite its avowed objectivity or desire for wholeness. “Significant” phenomena, though perhaps a highly subjective designation, depend on the ability of the perceiver to understand that connection is something that at all points exceeds subjectivity. Perhaps we need the sawdust in our eye in order to see how the sawdust of so many nebulae renders our subjectivity miniscule. Poetry, or poetic perception, makes no claims to complete science, nor provide convincing alternative types of description for
the same object. Rather it underscores how the force of the creation of life – the poesis of life – exceeds the purview of scientific discourse.

A sequence from an October 1860 entry pursues this point in terms of what could be called Thoreau’s “unmeasured” description. Again its touchstone is a critique of science:

All science is only a make shift--a means to an end which is never attained. After all the truest description & that by which another living man can most readily recognize a flower--is the {unmeasured} & elegant one which the sight of it inspires-- No scientific description will supply the want of this though…you should count & measure every atom that seems to compose it. …. In science, I should say all description is postponed--till we know the whole--but then science itself will be cast aside. But unconsidered expressions of our delight--which any natural object draws from us--are something complete & final in themselves—since all nature is to be regarded as it concerns man--& who knows how near to absolute truth such unconscious affirmations may come--which are the truest--the sublime conceptions of Hebrew poets & seers, or the guarded statements of modern geologists--{which} we must modify or unlearn so fast? (MV32:161; 10/13/60).

Science, as makeshift, is a means to an end and never an end in itself. It can never achieve the intensity of the lived instant of things impinging on us. It can never recreate this instant, this now, this experience as instancing. Scientific description is an incomplete endeavor insofar as it has to arrest the living object in order to describe it; in so doing it sacrifices the living force most fundamental to the object. Life stridently resists remaining captive to fixed systems of meaning. To be alive, for Thoreau, is to elude scientific definition; he consequently works to understand nature on the basis of its processes, the transience of its forms, its seasonal and yearly variations, etc. Science can count, analyze, and measure the natural object, but it cannot truly account for this living force. Rather it is the “unmeasured and elegant” description of our seeing a flower open,
the delightful participating in this living force, that is the truest description. “In proportion as we get & are near to our object,” Thoreau will say later in the same passage, “we do without the measured or scientific account.” This prompts Thoreau to rhetorically ask whether it will be the “guarded statements” of the “modern geologists” (statements which are self-consciously incomplete due to the inherent incompleteness of scientific knowledge), or the “sublime conceptions” of “poets and seers” that will bring us nearer to the truth of our “unconscious affirmations,” the joy we feel in approaching to the object, the joy of participating with it in a shared living instant, a joy that is unconsidered joy and complete and final in itself. Yet the answer is clear: poetry, in that it endows us with fuller means to perceive, must not be expelled from our approach to phenomena, but is integral to it. Thus “poetic perception” becomes essential for the quality of observation, and is itself affected when our actions are “inconsistent” with it.¹³²

As the entry continues, temporal and sensual fullness of this present protracts into a spatial topology of nature more generally:

Gerard has not only heard of & seen & raised a plant—& {felt} & smelled & tasted it—applying all his senses to it. You are not distracted from the thing—to the system in management. In the true natural order—the order or system is not insisted on—Each is first & each last. That {nature} presents itself to us this moment—occupies the whole of the present—& rests on the very top most point of the sphere—under the zenith. The species & individuals of all the natural kingdoms [sic]—ask our attention & admiration in a round robin— We make straight lines…while where nature has made curves—to which belongs their own sphere music. It is indispensable [sic] for hi{m} to square her circles{,} & we {ofter}{sic} our rewards to him who will do it. Who describes the most familiar object with a zest & vividness of imagery as if he saw it for the first time—the novelty consisting not in the strangeness of the object—but in the new & clearer perception of it (MV32:162-163; 10/13/60)¹³³
Along the lines of his 1852 conjecture that “[p]erhaps I can never find so good a setting for my thoughts as I shall thus have taken them out of” (4:296; 01/28/52), the Journal does not endeavor to square the circle of nature but, as Emerson says in *Natural History of Intellect*, to “dot” its “fragmentary curve.” Not only does nature provide the “material” for thought, but also it provides an implicit yet compelling order for these thoughts. The *Journal* as “unmeasured description” – if not “unmeasured poetry” – eschews hierarchies and arbitrary systems of classification, working instead to transcribe the natural distribution, or “disordered order” of phenomena. In the next section, we will more fully investigate how other modes of sensation than the visual – hearing, feeling, smelling and tasting – come to multiply and accentuate the relationship of the particular within this distribution.

First we can note that Thoreau’s increasingly polemical comments on the efficacy of scientific methodology complicate easy characterizations of his later career as that of an empirical scientist roving the fields, forests, and swamps of Concord collecting botanical data. Direct experience and close scientific observation, and indeed the methods of Humboldtian or Darwinian science, though Thoreau often celebrates and practices them, become scrutinized in the name of poetry. As Thoreau asks: “this habit of close observation – In Humboldt – Darwin & others. Is it to be kept up long – this science – Do not tread on the heels of your experience Be impressed without making a minute of it. Poetry puts an interval between the impression & the expression – waits till the seed germinates naturally” (3:331; 07/25/51). What is at stake in the close approach to phenomena is, to be sure, *how* we perceive and *whether* we “see”; but, at the same time so is how we dwell in the *interval* between the instant of seeing and the instant
of writing. In these intervals, we hold back with Thoreau to see the particular more clearly, from many perspectives and disjointed moments. It is a time of waiting and cultivation. “While I am abroad the ovipositors plant their seeds in me I am fly blown with thought-& go home to hatch-& brood over them” (3:330; 07/23/51). “I succeed best,” he writes on September 2, 1851, “when I recur to my experiences not too late, but within a day or two when there is some distance but enough of freshness” (4:28; 09/02/51). The Journal becomes built out of these intervals as tiny seeds of perceptions and observations grow into its perennial poetry. Subsequent perceptions add new temporal textures and tessellations, objects remain novel and vivid as each time we come to them with different eyes.  

Each poetic interval becomes the near-far space of a multiplied perception – a doubling and distancing of sight. The interval opens seeing to a greater precision, but a precision that should not be confused with the precision with which science flatters itself. It is the precision of an enriched perception. The closer we get to the object, the less we need the “scientific or measured account.” In this proximity, quantitative or calculative methods of thinking actually become less precise, insofar as they cannot measure the force of life in the perceptual instant.

So if the Journal is “more simple and less artful,” it is at once more unmeasured. Thoreau does not abandon the “poetizing” of his earlier writings; he experiments with new descriptive, “postsymbolic” modes of writing in his later Journal (or for that matter his late natural history essays such as “The Succession of Forest Trees,” “Wild Apples”). Throughout the Journal, poetry and science dance in ever-expanding spirals, rising and falling on the breaths of winds, like two of Whitman’s dallying eagles. Each perception then is not the harmony of poetry and science, but arises from their unresolved agon.
Thoreau will go so far as to say that it is “impossible for the same person to see things from the poet’s point of view and that of the man of science” (3:356; 2/18/52). Yet his work will nonetheless constitute an attempt to see from both points of view, drawing the disparities into the binocular gaze of his perception. Perception in his work becomes less a catastrophic point where the poetic and scientific points of view disappear into a seamless whole, than a catastrophic point – a point where the two intersect and mutually intensify, yet remain unresolved. As catastasis literally means, it is a “dwelling-in” or a “settling in,” less an ek-stasis than a falling farther into the thing. In the idiom of tragic drama, catastasis refers to the part of the plot before the catastrophe when things become raised to a fever pitch. In rhetoric, it is the exordium, when the orator is in full command of his or her topic, fully dwelling in its language or discourse. In Thoreau’s poetic-scientific writing of the Journal, it refers to those unguarded moments when facts are in full bloom, bursting forth from the face of the page.

As we will now turn to consider, it is through this double-discourse of poetry and science that Thoreau’s work constitutes its profound meditation on the thinking of perception. Through prolonged, intense attention to the natural distribution that each particular demands, Thoreau develops what could be called, after twentieth-century psychologist James J. Gibson, an “ecological perception” – a perception of connection and unsettling of connection that takes into account the multiform richness and particularity of sensation offered to us by the world. Perceptions perpetually undo perceptions by unseating previous perceptions. They assert new claims on the perceiver, burning holes in the fabric of experience. Perception becomes tantamount to an un-experiencing or unlearning of the world so we can see it anew. Through perception we
fall in love with the world, it opens us to the unmeasured, “unconsidered expressions of our delight – which any natural object draws from us,” expressions “complete & final in themselves.”

4. Ecological perception

Thoreau’s “dwelling-with particulars” is by no means static – as we have seen it involves an ongoing movement among the myriad of natural phenomena, which Thoreau literalizes through his process of writing. This writing could be said to take place through the development of an interactive negotiation of landscape, mindscape, and textscape. As he notes in his Journal on New Year’s Day, 1858: “I have lately been surveying the Walden woods so extensively and minutely that I now see it mapped in my mind's eye” (MV25:33; 01/0158). He becomes an intimate cartographer in which the thinking of place becomes an ongoing exploration of the terra nova of thought itself.

To be sure, much of the critical work on later Thoreau, especially on his Journal celebrates the vivid, multiform tropes of vision through which this presentation of nature becomes realized: the mapping in his mind’s eye. To this end, Peck puts key emphasis on the role of visual perception:

That Thoreau is a preeminently visual writer has been obscured by comparisons with Emerson’s famous ocularity. It is true that Thoreau’s relation to nature is more broadly sentient, more aural and tactile, than Emerson’s, but his spiritual vocation is, if anything, even more dependent on vision (that is, on real seeing) than that of his mentor. None of his writings show this more clearly than his mature Journal, which presents a complex picture of the world (50).

Peck reinforces this thought with a variety of visual examples, most prominently those in which Thoreau draws analogies, correspondences between phenomena that share a visual
likeness. On this basis he describes Thoreau’s *Journal* project as “systematically searching the world for likeness, toward the discovery of its larger ‘symmetry.’” Or again soon after, he adds that: “while he sometimes uses his *Journal* to investigate organic (biological, geologic, or botanical) relationships among natural objects, the greatest number of its recorded observation of similitude are…achieved through purely visual means” (Peck 61). This coheres with Peck’s earlier valorization of the “fluid reciprocity” between categorical and particular phenomena.

Yet, if we dwell on – or dwell with – the manner in which Thoreau draws correspondences between the multiplicity of sensory events through non-visual modes of perception, we can enrich our understanding of how perception operates more generally. This is to gauge how, in Peck’s terms, “Thoreau’s relation to nature is broadly sentient…aural, and tactile” (50). In this regard, Thoreau’s follows the insight he attributes to the seventeenth-century natural historian John Gerard cited above, namely that by attending to the fullness of diverse sensory information one can better understand a particular phenomenon: “Gerard has not only heard of & seen & raised a plant--but felt. & smelled & tasted it--applying all his senses to it. You are not distracted from the thing--to the system in management” (MV32:162; 10/13/60). Attention to other forms of perception than only visual ones gives us a richer understanding of perception in Thoreau’s work, and broadens how we understand his encounter with particulars-in-relation.

Again, Thoreau circumscribes this point in his earlier work, yet extends and transforms it throughout the *Journal*. To continue the passage cited towards the outset from “Natural History of Massachusetts”:  

159
The true man of science will know nature better by his finer organization; he will smell, taste, see, hear, feel, better than other men. His will be a deeper and finer experience. We do not learn by inference and deduction, and the application of mathematics to philosophy, but by direct intercourse and sympathy. It is with science as with ethics, we cannot know truth by contrivance and method; the Baconian is as false as any other, and with all the helps of machinery and the arts, the most scientific will still be the healthiest and friendliest man, and possess a more perfect Indian wisdom (Collected Essays 41).

Thoreau, through his own sensitivity to the whole myriad of atmospheric stimuli, helps us cultivate our own attention to forms of particular knowledge. This expands the sensorium of thought. It proposes a thought that is not merely dependent on the sovereignty of the visible – the dominant paradigm of Western thinking – but draws on the whole sensual vocabulary: on all the “senses of Walden.” This is not at the expense of the visible but at the expanse of the visible: the idea is that the senses mutually inhabit one another, and thus knowledge of the world is multiple and concurrent. Yet at the same time as the senses mutually inhabit one another, each provides unique information about particular phenomena – the senses do not present unified, synaesthetic knowledge, but could be said to work together through their fundamental disunity.

So to get a sense of Thoreau’s ecological perception, let us turn again to particulars. To be sure, auditory perceptions resonate throughout Thoreau’s writing. In “Natural History of Massachusetts,” for example, he describes how: “In May and June the woodland quire is in full tune, and given the immense spaces of hollow air, and this curious human ear, one does not see how the void could be better filled” (Collected Essays 27). The season becomes marked by the birds: they transcribe the modulations from spring to summer: “As the season advances, and those birds which make us but a passing visit depart, the woods become silent again...the phœbe still sings in harmony
with the sultry weather by the brink of the pond, nor are the desultory hours of noon in the midst of the village without their minstrel” (27). “Sounds” from Walden is nonetheless Thoreau’s most profound meditation on how sound immerses the perceiver in the world of nature. The locomotive whistle draws a pointed commentary on the effects of commerce on the Massachusetts countryside, as its timbres dart against the city walls, as “all the Indian Huckleberry hills are stripped, all the cranberry meadows are raked.” Distant church bells play against the Aeolian harp of the woods with a “vibratory hum,” their echo becomes an “original sound,” one “partly the voice of the wood.” The lowings of cows, the bayings of dogs, the cackle of roosters, and calls of screech-owls and the loon, likewise become the “lingua vernacula of Walden Wood”; each gives Thoreau “a new sense of the variety and capacity of that nature which is our common dwelling” (421-422). Like the language of the fields which he slowly comes to speak, these sounds become “quite familiar to [him] at last” (538). Passages like these reverberate through the nearnesses and distances of the Journal, its familiar and unfamiliar settings: “When I stand out of the wind, under the shelter of the hill beyond Clamshell, where there is not wind enough to make a noise on my person, I hear, or think that I hear, a very faint distant sing of toads, which, though I walk and walk all the afternoon, I never come nearer to” (MV31: 126-127; 04/05/60).

Yet if we turn to passages that foreground perceptions of smell and taste, we can perhaps get a fuller sense of what is at stake in considering ecological perception. Smell and taste further dislocate perception from a fixed subject-center into the heterogeneous, dispersive atmosphere of stimuli. Further, they can allow for a nearer approach: as Thoreau reports on April 27, 1852 at the first appearance of the “aments of balm of
Gilead” that the bud “is filled with ‘a fragrant viscid balsam’ which is yellowish and difficult to wash from the fingers. It is an agreeable fragrance at this season. A nearer approach to leaves than in any tree?” (4:495). In a passage from August 4, 1851, Thoreau marks how the whole of the sensorium pays tribute to the royal month of August:

In the fields I sense the sweet scented life everlasting which is half expanded. The grass is withered by the drought—As my eye rested on the blossom of a hedge I heard the note of an autumnal cricket—& was penetrated by the sense of autumn—was it sound? or was it form? or was it scent?, or was it flavor? It is now the royal month of August. When I hear this sound I am as dry as the rye which is everywhere cut & housed—though I am drunk with the seasons wine.

The farmer is the most inoffensive of men with his barns & cattle & poultry & grain & grass— I like the smell of his hay well enough—though as grass it may be in my way (3:352; 08/04/51).

Here the autumn onset does not merely index to the chronochromie of changing leaves, but moves through the varied domains of sensation: the sweet scented life joins to the dry feeling of withered grass joins the eye resting on the blossom of a hedge joins the note of a cricket, itself a “dry” sound. Yet the “sense of autumn” that penetrates Thoreau remains as a series of uncertain, sensual experiences: “was it sound? Or was it form? Or was it scent? Or was it flavor?” The season’s wine becomes inebriating, the drunk smell of fermenting hay. Walking is disoriented as the high grass resists movement, like a slow slog through a swamp. We can note in passing that in the entries that follow this passage, among which are some of Thoreau’s more memorable “moonlight passages,” he develops this sensual disorientation: in the “faint diffused light in which there is light enough to travel and that is all,” sight becomes dimmed, and a series far-off night-sounds betray ready-made understandings. Thoreau thus accomplishes “clearer sight” of phenomena, not only through figures of clarified vision, but also through figures of obscurity, in a
way that painters such as Cezanne or Picasso, composers Debussy or Schoenberg will unsettle perception and perspective in their work in order to open new modalities of perception, new *Verklärte Nächte.*

We can juxtapose to this to another rich passage from the Journal, dated May 23, 1853, a passage the day before a somewhat infamous one which reads: “Talked or tried to talk to RWE. Lost my time – nay almost my identity – assuming a false *op*-position where there was no difference of opinion - talked to the wind – told me what I knew & lost my time trying to imagine myself somebody else to oppose him” (6:149; 05/24/53). Rather, the passage is not in opposition to the natural fact of Emerson, but to the particulars encountered in the evening light of Ministerial Swamp. He prefaces the passage with visual metaphors: “The poet must bring to nature the smooth mirror in which she is to be reflected. He must be something superior to her something more than natural” (6:145-146; 05/23/53) Then, after listing a series of flowers in bloom animated in the lively din of the windy May weather – the small veronica on the Cliffs, *Arenaria Serpyllifolia,* thyme-leaved sandwort, etc., he notes:

As the Seasons revolve toward July. Every new flower that opens no doubt expresses a new mood of the human mind. Have I any dark or ripe orange yellow thoughts to correspond? The *flavor* of my thoughts begins to correspond…For some time Dandelions & mouse ear have been seen gone to seed – autumnal sights…As I rise the hill beyond geum meadow I perceive the sweet fragrance of the season – as if the vales were vast saucers full of strawberries – as if our walks were on the rim of such a saucer- With this couple the fact that directly the fresh shoots of the firs & spruces will have the fragrance of strawberries (3:146-147; 05/23/53)

Again the metaphorical correspondences Thoreau draws are not merely visual, but elicit a more varied perceptual response. As in the previous passage, Thoreau foregrounds his practice of phenology, his scientific transcription of the coming into view of phenomena.
Yet in Thoreau’s phenological practice the season is not just seen, but heard, felt, tasted and smelled. Even the thought he has out of season, the “autumnal sight” of the Dandelion gone to seed – further registers a multiform phenology, if not phenomenology of sensation. Such redolent passages are common throughout the Journal and the late natural history essays. “Wild Apples” abounds in sweet and sour passages. As Walls writes, “Part of the relish of the essay is Thoreau’s elaborate connoisseurship of the flavors and textures of these scruffy, shrunken, sour, bitter, and cidery wild fruit, emphasizing that frontier contacts need not lack exquisite refinement” (Walls 219).

Indeed, Thoreau’s text memorializes the diverse pleasures of the taste of wild apples, now mainly extinct as sweet commercial apples have almost wholly replaced them. The smell of woodsmoke across the November twilight, the difference in smell of an apple and a muskmelon, the shift in spring perfumes towards a summer smell oncoming. Again these are not so much instances of synaesthesia as the perception of the relations of all the senses of a given instant, in a given approach to here.

Taste perception becomes another way of knowing that exceeds the purview of sight-based science. Thoreau makes this explicit: “Science is often like the grub which, though it may have nestled in the germ of a fruit, has merely blighted or consumed it and never truly tasted it. Only that intellect makes any progress toward conceiving the essence which at the same time perceives the effluence” (XII: 23; 3/7/1859; Walls 223). Parenthetically, one could note the importance of taste to Darwin’s science. Despite its solemn longevity, the Galapagos tortoise, for example, nonetheless isn’t spared from Darwin’s habit of taste-testing the species he investigates, like the rheas and armadillos he eats in Argentina. Of the tortoise, he remarks: “While staying in this upper region,
[with a party of Spaniards on the Galapagos] we lived entirely on tortoise-meat. The breastplate roasted (as the Gauchos do *carne con cuero*), with the flesh attached to it, is very good; and the young tortoises make excellent soup” (273). (Indeed the tortoises, like Thoreau’s estimation of his own poetic gifts, “Maybe less delicious but are a more lasting food” (VI: 190-91, Walls 218)). Likewise the lizards, who Darwin otherwise characterizes as torpid, dirty black, and half-stupid, don’t escape his dinner table. “The meat of these animals when cooked...by those whose stomachs rise above all prejudices...is relished as very good food. Humboldt has remarked that in inter-tropical South America, all lizards which inhabit dry regions are esteemed delicacies for the table” (Darwin 284). As Thoreau might add, “the science of Humboldt is one thing, poetry is another thing” (“Walking,” *Collected Essays* 244). Nonetheless, Thoreau cites Darwin to this effect: “Charles Darwin, in his *Voyage round the World*, speaks of finding wild potatoes on the islands of the Chronos Archipelago in South America...The tubers ‘resembled in every respect and had the same smell as English potatoes; but when boiled they shrunk much and were watery and insipid, without any bitter taste” (*Wild Fruits* 118). Following the will of wildness, knowing by tasting becomes radicalized into a devouring raw. To live becomes “to live deep and suck out all the marrow of life” (*Walden* 394). “We are cheered when we observe the vulture feeds on the carrion which disgusts and disheartens us and deriving strength and health from the repast” (575). Animals come to know each other through eating: “[S]uch is Nature, who gave one creature a taste of yearning for another’s entrails as its favorite tidbit!!” (MV31:248; 06/11/60; Richardson 382). Yet it is perhaps Thoreau’s extended mediation on the
European cranberry, *Vaccinium oxycoccus* (a name bestowed by Linnaeus), that most eloquently expresses his ecological perception:

I have come out this afternoon a-cranberrying\(^{139}\)…This was a small object, yet not to be postponed, on account of imminent frosts – that is, if I would know this year the flavor of the European cranberry as compared with our larger kind…It is these comparatively cheap and private expeditions that substantiate our existence and batten our lives – as, where a vine touches the earth in its undulating….Better for me, says my genius, to go cranberrying this afternoon for the *Vaccinium oxycoccus* in Gowing’s Swamp, to get by a pocketful and learn its peculiar flavor – aye, and the flavor of Gowing’s Swamp, and of *life* in New England – than to go to consul in Liverpool and get I don’t know how many thousands of dollars for it, with no such flavor. Many of our days should be spent, not in vain expectations and lying on our oars, but in carrying out deliberately and faithfully the hundred little purposes which every man’s genius must have suggested to him. Let not your life be wholly without object, though it be only to ascertain the flavor of a cranberry, for it will not be only the quality of an insignificant berry that you will have tasted, but the flavor of your life to that extent, and it will be such a sauce as no wealth can buy (*Wild Fruits* 165-166).

By drawing on the whole of the sensorium, Thoreau “prompts” us towards a radical re-inscription of “intimate,” deliberate knowledge (as Cavell celebrates) into the thinking of place and the place of thinking. The insignificant berry comes to be significant insofar as *how* it is tasted, what the quality of our tasting says about the flavor of our life. In every berry we taste the extent of our relatedness to the earth.

We could take a further excursion. This broader sensorium of perception posits Thoreau in the vicinity of twentieth-century psychologist James J. Gibson’s “ecological” perception. Gibson devotes his work to redefining the traditional model of perception from a static processing of sensory input (the model of staring at an object, processing, and understanding its meaning)\(^ {140}\) to one in which “surfaces and objects in the world, [provide] direct information about the layout of those surfaces and objects, and about
movement within the world and by the observer” (Bruce and Georgeson 303). For
Gibson, the sensory-input model of perception should be treated as “ancient history.”

“Knowledge of the environment,” he says instead, “develops as perception develops,
extends as the observers travel, gets finer as they learn to scrutinize, gets longer as they
apprehend more events, gets fuller as they see more objects, and gets richer as they notice
more affordances. Knowledge of this sort does not come from anywhere; it is got by
looking, along with listening, feeling, smelling, and tasting” (Gibson 253). Thus in
contrast to the traditional “senses,” Gibson instead prefers to say “perceptual systems” in
which sensory data is co-constructed as the embodied participant negotiates the world.

Although Gibson’s main goal is to break up the traditional way of understanding
visual perception as the processing of a static visual stimulus (something looked at), his
insistence on taking movement as the starting point of perception easily lends itself to
what he calls “non-visual information about the self.” Gibson says:

The point I wish to make is that information about the self is multiple and
that all kinds are picked up concurrently. An individual not only sees
himself, he hears his footsteps and his voice, he touches the floor and his
tools, and when he touches his own skin he feels both his hand and his
skin at the same time. He feels his head turning, his muscles flexing, and
his joints bending. He has his own aches, the pressures of his own
clothing, the look of his own eyeglasses – in fact he lives within his own
skin (115).

Gibson’s “proprioception” (or, as he prefers, “egoreception,” sensitivity to self) becomes
a continuous act of perception in which the coperceiving self is inextricable. Gibson in
many ways takes his conceptual cue from William James’s “stream of consciousness,”
and will come to similarly hold that perceiving is a stream, and that discrete percepts, like
discrete ideas are “as mythical as the Jack of Spades…The continuous act of perceiving
involves the coperceiving self…the very term perception [as well as proprioception] must

167
be redefined to allow for this fact” (240). Gibson’s work is then developed by cognitive philosopher Alva Noe, who posits an “enactive” perception based on the model of touch. But again not a static touching, but an ongoing feeling of the world – like a blind man traversing unfamiliar space. Thus for Noe, perception is understood as a form of action, as a skillful haptics, almost an athleticism. Insofar as perception is enactive, Noe posits the perceiver as perpetually drawing on and manipulating the living archive of the world. Instead of bare sensory input, the world serves as a kind of external memory for the perceiver.

In many ways, Thoreau has much in common with Gibson and Noe: Thoreau’s ecological perception is an active perception insofar as it at once locates and dislocates one’s notion of the place he or she is moving through. It is a mobile perception of a world itself in movement, rendering the familiar unfamiliar so that we might see it anew. It insists that thinking about perception does not merely belong to the province of the visible, but engages the full range of sensory events. Thoreau himself often gestures towards the haptic model of perception which Noe puts at the center of his perceptual theory, explicitly stating this in 1860: “A man has not seen a thing who has not felt it” (MV31: 19; 2/23/60). Yet Thoreau, unlike Gibson or Noe, will not locate his active perception only in invariant externalities, in what the world “makes itself available to us” – these cleave perceiver from perceived, subject from object, mind from earth, so to treat the latter in each case as an opportunity for use. Rather, as Thoreau famously asks in Walden, “Shall I not have intelligence with the earth? Am I not partly leaves and vegetable mould myself?” (432).
This “with” is of fundamental significance. To Thoreau, ecological perception is another way of describing our poetic dwelling with particulars; it further highlights that to be among them is to bring them together in their differences, as they move and change, as we move and change in relation to them. This is to reiterate Thoreau’s positioning vis-à-vis phenomena, i.e. that it is a mistake to “give your chief attention to the phenomenon which excites you as something independent on you, and not as it is related to you. The important fact is its effect on me…the point of interest is somewhere between me and them (i.e. the objects)” (MV24:609; 11/5/57). We will now turn to consider what is at stake in having intelligence with the earth, in not merely treating the world as a space that we blindly tap our way through, but as the ongoing co-construction of a living world that we both endeavor to think, and that comes to “outthink” us. Again this is to configure ourselves perpetually in approach to objects, in this “somewhere” between ourselves and them, in the evanescent, excited moments of feeling alive.

5. “Each wind is self-registering” – thinking nature

For Thoreau, the process of perception becomes a negotiating of the nearnesses and distances, departures and returns that characterize our unmeasured approaches to phenomena. By emphasizing figures of proximity and remoteness, Thoreau moves away from the absolute, ecstatic “Contact!” he describes atop Mt. Ktaadn. The “constant endeavor” of getting “nearer and nearer here” remains a perpetual approach. Phenomena are drawn close, yet remain distant in their resistant materiality; we hold back before facile generalizations or staged moments of cosmic union.
This “asymptotic contact” could be thought of in terms of an intimacy, an intimacy which marks the material space between, as well as the material differences of proximal surfaces. Intimacy is the doubleness of contact, of two touching surfaces aware of their perpetual approach to one another, of their constant falling into the difference of the other. Intimacy is not fusing or unification, it does not seek to take hold of or incorporate the object, but rather it is to hold the object in absolute proximity, in the fullness of relation, and in awareness of the contact space as itself a dynamic space to be negotiated. Intimacy is a non-appropriative thinking of phenomena by which we let nature, in its onflow, slip through our fingers. To be intimate is to let go. Intimacy is an attention to process, to moods and manners; intimate knowledge is thus the registration of minimal differences, to particulars and shifts in particulars.

As we have seen, Thoreau’s ongoing work is to become intimate with the particulars of his place, to get to know his neighbors. To this end, Thoreau keeps a notebook devoted to “Common Places,” which details all the uncommon events and perceptions he finds in these places. In the Journal, every particular or every perception becomes a noteworthy event; the forest and the swamp become a fanfare of particulars and perceptions. Thoreau provokes us to think our place and our position (the collective of particulars with which we dwell) as themselves on the move. Thinking place becomes a process of deracination or displacement. Locality and journeying are thus always in simultaneous tension,143 such that the passage through a place is always a place of passage. Places become temporary concentrations of charged, dynamic variables. To know a place becomes for Thoreau to catalogue its subtle changes and altered perspectives. Thus we can only come to know the particulars of our place through a
doubling and distancing of sight, through “vicinity” (neighbors, nearness) and “surveying from a distance.” We thus find Thoreau in “Life Without Principle” “sauntering in [his] native port,” or looking out on Walden Pond as the gateway to an exotic world just opened before him (Collected Essays 351).

In the Journal this becomes hyperbolized as Thoreau continually revisits familiar places to search out their minimal differences. To see this, let’s consider more fully a passage we excerpted earlier, a passage, like so many in the Journal, which emerges from the midst of an evening walk:

I seemed to recognize this November evening as a familiar thing come round again--& yet I could hardly tell whether I had ever known it or only divined it. The November twilights just begun--! it appeared like a part of a panorama at which I sat spectator--a part with which I was perfectly familiar just coming into view--& I foresaw how it would look & roll along & prepared to be pleased just such a piece of art merely infinitely though exquisitely sweet & grand did it appear to one & just as little were any active duties required of me-- We are independent of all that we see-- The hangman whom I have seen cannot hang me. The earth which I have seen cannot bury me. The earth which I have seen cannot bury me—Such doubleness & distance does sight prove. Only the rich and such as are troubled with ennui are implicated in the maze of phenomena. You cannot see any thing until you are clear of it. The long RR causeway—through the meadows west of me--the still …twilight in which hardly a cricket… was heard (?)--the dark bank of clouds long after sunset above the on the horizon--the villagers crowding to the P.O.--& the hastening home to supper by candle light--had I not seen all this before--! What new sweet am I to expect from it?…That we may behold the panorama with this slight improvement or change--this is what we sustain life for with so much effort from year to year-- And yet there is no more tempting novelty-- than this new November-- No going to Europe or another the world--is to be named with it P.O. & all Give me the old familiar walk --with this ever new self--with this infinite expectation & faith--which does not know when it is beaten. We’ll go nutting once more-- We’ll pluck the nut of the world. (MV27: 293-295; 11/01/58).

Through his instances of attention to particularity, Thoreau offers us pictures of difference in process. He constructs minimal monuments to this difference, evanescent monuments, as evanescent as the phenomena themselves. “[No] one to my knowledge
has observed the minute differences in the seasons – Hardly two nights are alike— The rocks do not feel warm to night for the air is warmest – nor does the sand particularly. A Book of the seasons – each page of which should be written in its own season & out of doors or in its own locality wherever it may be –” (5:477; 06/11/51). Thoreau’s memorial practices are future-oriented. Every perception is a down-payment on future perceptions. Thus Thoreau’s is not the “unbearable memory” of Borges’ Ireneo Funes, who “remembered not only every leaf of every tree in every patch of forest, but every time he had perceived or imagined that leaf” (136). For Thoreau the “teeming world” of particulars and perceptions are seeds of new perceptions to germinate naturally. From strange yesterdays we prevail to do our morning work, planting seeds and watering the garden. Our reminiscences lean against autumn evenings to come, doubling our sight and lending doubled panoramas. To behold minimal difference, slight improvement, or change from this doubled distance “is what we sustain life for with so much effort from year to year.” To know intimately becomes to walk the old familiar walks with an ever-new self.

Therefore, we could say that intimate knowledge depends on the inscription of difference into familiarity. Deliberate particular knowledge becomes a process by which extremity is made intimate, and intimacy extreme. “Not till we are lost, in other words, not till we have lost the world, do we find ourselves, and realize where we are and the infinite extent of our relations,” Thoreau says in Walden (459). Throughout Thoreau’s work, we find that forms of intimate knowledge are often understood through forms of otherness: via dreams, myth, brute neighbors, former inhabitants, friends, the East, or, most radically, the extremities of wildness. Only through this otherness can we see

172
the particular before us. The particular is what is different from everything else, yet
stands in relationship to everything else. We are gathered in this heterogeneous world of
seeds and stones, flesh and fluid, friends and foreigners. (In this way, Thoreau will
anticipate the “world of difference” poet Paul Benjamin Blood strives to render in his
word “pluriverse,” a word which William James picks up to describe our world of
particulars, our “plural universe”).

For Thoreau, “wilderness” especially comes to denote the process of othering, of
making different. The wild is the perpetually different, or differentiating. The wild is the
force of the difference of particulars, and thus the force of life. As Thoreau will say in
“Walking”: “Life consists with wildness. The most alive is the wildest” (240). As he will
say in Walden: “We need the tonic of wildness” (317). As the force of life, the wild is
thus at the same time what is most intimate to us: “We have a wild savage in us” (248).
“It is in vain to dream of a wilderness distant from ourselves. There is none such. It is the
bog in our brains and bowels, the primitive vigor of Nature in us that inspires that dream.
I shall never find in the wilds of Labrador any greater wildness than in some recess of
Concord, i.e. than I import into it (MV21:303; 08/30/56). If wilderness is the
preservation of the world, it is not so much in the form of a national park or reactionary
green movement, but rather it is in the wild vigor of our everyday lives. It is the bog in
our brains and our bowels. It is in our manners of touching the world, and letting the
world touch us. We touch the tough surfaces – or take “rugged walks” like Thoreau’s to
the summit of Mt. Monadnock, or slog through cold wet swamps to taste the wild fruit of
our labors. We risk the hardened shoulder of the earth turned persistently against us, at
times ferociously. We risk new meanings, or new ways of perceiving nature and
ourselves. We risk ourselves. In so doing we shift the ever-uncertain boundary between the human and inhuman, we get to know new brute neighbors, including the brute neighbors within ourselves.

Thoreau thus points us towards what could be called a wild thinking, an intelligence with the earth. His unmeasured poetry becomes a gramática parda, a tawny grammar – a chaotic language which he describes in Walking and transcribes with the bird-cries in Walden and the Journal:

Heard the Field or Rush Sparrow this morning- F. juncorum. –Geo. Minott’s huckleberry bird – It sits on a birch & sings at short intervals apparently answered from a distance- It is clear & sonorous heard afar. But I found it quite impossible to tell from which side it came.- sounding like phe-phé --- phér-phér-tw-tw-t-t-t.- The first 3 slow & loud-the next two syllables quicker-& the last part quicker & quicker becoming a clear sonorous trill or rattle like a spoon in a saucer. (4:495; 04/27/52).

There can be no meaning ascribed to the call of the rush sparrow; it can only be transcribed. In this light, Thoreau’s transliterations of bird calls in Walden into wild aphorisms (e.g. the “Oh-o-o-o-o that I had never been bor-r-r-r-rn!” which echoes across the pond with “tremulous sincerity” (422)) lack the force of bare transcriptions into typeface. In the Journal, this tawny grammar is left unedited. Bird-noise does not become a metaphor for how we can better understand our own existential situation; it remains simply bird-noise. Its force is its sheer defiance to meaning, its sheer wild joy.

So if the Journal is more simple and less artful, it is at once more wild. Through such wild descriptions, Thoreau works to let the earth speak for itself, if in an incomprehensible language. (In this context we can recall Wittgenstein’s aphorism at the end of Philosophical Investigations that “if a lion could talk, we could not understand him”). As Thoreau remarks in his last Journal entry, “each wind is self-registering”
Each wind, as it vibrates the forest, or as it drives rainwater into horizontal furrows along the causeway gravel, inscribes itself across the landscape. We may seek to read these inscriptions, but as self-registrations or self-references, they remain unreadable. The resistant, excessive force of nature pushes back against any ultimate meaning or universal law. We can assign a meaning to the wind, and find ways to significantly relate to it, yet there will always be enough persistent chaos to confound any final attempts at understanding (Specq 85; Cameron 75).

In other passages, Thoreau goes even farther to posit that nature, given its modes of self-organization, and its forces of self-production and self-preservation, comes to think for itself. Drawing on the work of Darwin, Gray, and the geologist Lyell, he describes the slow beginnings of philosophy in the forest:

> so botanically – the greatest {changes} in the landscape are produced more gradually than we expected. If nature has a pine or an oak wood to produce she manifests no haste about it. Thus we should say that oak forests are produced by a kind of accident i.e. by the failure of animals to reap the fruit of their labors-- Yet who shall say that they have not a fair knowledge of the value of their labors--that the squirrel when it plants an acorn--or the jay when it lets one slip from under its foot has not a transient thought for its posterity? Possibly here, a thousand years hence, every oak will know the human hand that planted it-- How many of the botanists {arts} & {inventions} are thus but the re-discovery of a lost art - i.e. lost to him here or elsewhere (MV32:65; 01/13/61).

In “The Succession of Forest Trees” Thoreau calls this type of knowledge, borrowing a phrase from Emerson, the “method of Nature.” It is the internal logic of the forest trees that mark their own formative processes and even the intervening hands of humans: “Possibly here, a thousand years hence, every oak will know the human hand that planted it.” It is an instinctual animal knowledge that verges on a self-awareness of the co-constructing future ecosystems, “a transient thought for its posterity.” (Indeed there is
much more to say on Thoreau and instinct. We could cross-list this passage to the series of observations in the *Journal* of newborn kittens as they blindly move to the mother’s teat or adeptly adjust themselves to avoid falling. “You would say that this little creature was as perfectly protected by its instinct in its infancy as an old man can be by his wisdom” (MV32:108)). In *Wild Fruits*, Thoreau’s celebration of natural intellect becomes a sort of call to worship:

> little oases of wildness in the desert of our civilization, wild as a square rod of the moon, supposing it to be uninhabited. I believe almost in a personality of such planetary matter, feel something akin to reverence for it, can even worship it as terrene, titanic matter extant in my day. We are so different we admire each other, we healthily attract one another. I love it as a maiden. There spots are meteoric, aerolitic, and such matter has in all ages been worshipped. Aye, when we are lifted out of the slime and film of our habitual life, we see the whole globe to be an aerolite, and reverence it as such, and make pilgrimages to it, far off as it is. …It would imply the regeneration of mankind if they were to become elevated enough to truly worship sticks and stones…The more thrilling, wonderful, divine objects I behold in a day, the more expanded and immortal I become (*Wild Fruits* 168-9).

How are we to understand these passages? At first blush, it is easy to hear in them endorsements for a “new-age” animism, one that would personify the oak that will one day have a human intelligence, or revere planetary matter as human personality. Yet as Cavell argues in *In Quest of the Ordinary*, when considering the intelligence or sentience of nature, we do not understand flowers to think or feel as we do, but perceive that we should act *as if* they think and feel in their own way, a way different than we do (69). This would serve to constantly unseat and redefine our comportment towards them. It would allow them to flower from their own particularity, in their own particularity. How might we approach these flowers as if they *could* feel, as if they *could* know? How
would it regenerate or elevate humankind if we did worship the stones – not as idols to which we would be servile – but as so many thrilling, wonderful, divine objects? This would involve a non-appropriative thinking of the natural object, one that does not treat it as an object for use, but as an end in itself. A thinking that does not hold but beholds.

We might also hear in these passages the outlines of a type of knowledge that is non-anthropocentric. For Cameron, Thoreau’s work in the *Journal* is to dissociate the thinking of nature from “the background of human concerns” and “human significance” (66; 75). Cameron in this regard, shows the *Journal* as oriented towards the impersonal – almost to the point of claiming that Thoreau liquidates the human. Although, as Specq rightly asserts, Thoreau’s concern is always to announce the “existential intensity” of humanity’s relationship to nature (since, as Thoreau says, “all nature is to be regarded as it concerns man”) (Specq 85), Cameron nonetheless provides a striking figure for how thinking nature becomes a complex process in which nature, in its impersonal force, violates our settled mental contexts:

The consequences of the doubleness and of the displacement of human perspective as I have been describing them are (1) a form of analogy which seems unfamiliar to us, for through it the mind becomes the receptacle for material that is alien to it; (2) an entire book predicated on such analogies in which the terms of ordinary hierarchy that subordinates nature to human nature (and the ordinary way of bridging the difference between the two, by likening nature to the mind) are suspended and transposed. If the word “catachresis” could be metaphorized so it described not simply a figure of speech in which a word violates a context by its unconventional habitation there (as pictures of nature violate our conception of what should inhabit the construct we call “mind”) but could also apply to forty-seven manuscript volumes (to the fact of those volumes as well as to their content) it would appropriately designate the transpositions about which I am speaking. In Thoreau’s *Journal* nature and the mind are *not* like each other, or if they are, it is because man has
been naturalized, because nature has been as if driven into the mind (Cameron 149-150).

Thus it is not that Cameron posits Thoreau as abandoning any relationship with the world, but rather delineates the complex mechanism for how he understands the mind and world to relate (a “form of analogy which seems unfamiliar to us”). Cameron, by “suspending and transposing” the “ordinary hierarchy” that “subordinates nature to human nature” rather poises the mind and nature in the most intimate proximity of their differences. This resists identifying mind and world and thus can allow for a thinking of nature that at once lets nature think for itself: “nature and the mind are not like each other, or if they are, it is because man has been naturalized, because nature has been as if driven into the mind.” The “naturalization of the mind” could be restated as a becoming-wild of thinking – as an intelligence with the earth.

It is a knowledge in which we do not “think of nature” so much as allow nature to think for us – for it to carry our thoughts, as on the back of Celan’s ram, the world gone beneath our feet. To think nature would be then to be carried by nature, carried on the onflow of its becomings. “Would you see your mind – look at the sky. Would you know your moods, be weather-wise (4:291; 01/26/52). In “Walking,” Thoreau describes this in terms of a “Sympathy with Intelligence”:

My desire for knowledge is intermittent, but my desire to bathe my head in atmospheres unknown to my feet is perennial and constant. The highest that we can attain to is not Knowledge, but Sympathy with Intelligence. I do not know that this higher knowledge amounts to anything more definite than a novel and grand surprise on a sudden revelation of the insufficiency of all that we called Knowledge before – a discovery that there are more things in heaven and earth than are dreamed of in our philosophy. It is the lighting up of the mist by the sun. Man cannot KNOW in any higher sense than this, any more than he can look serenely and with impunity in the face of the sun: ‘You will not perceive that, as perceiving a particular
thing,’ say the Chaldean Oracles” (Collected Essays 250).

In the final analysis, Thoreau thinks with and within nature. He thinks nature and lets nature think for itself and carry his thoughts. It is a thinking that is enactive, yet non-appropriative. It is an attention in/to how place is continually shifting and becoming other. It is openness to multiform sensations, new atmospheres in which his head can bathe.

In this sense, in the words of Norwegian philosopher Anstein Gregersen, “perception is an achievement” – or as Thoreau himself says, to perceive becomes our “greatest success” (MV30: 37; 10/04/59). But what kind of success? Does this mean that the success of perception is to interpret the hieroglyph of nature – its symbol, its correspondences? Is it to gain scientific certainty of a particular phenomenon? The conjecture here is that for Thoreau the success of a perception is not a hermeneutic success – the success of interpreting a symbol of nature and assigning it a meaning. Rather the success of a perception is to remain in relation to the ineffable, to what is unexplainable, to resistant thingness. This is a sort of negative capability. To hold back from assigning a given organism to a class or genera, species, or even taxon. To “not be in haste to detect the universal law,” but “see more clearly a particular instance.” To remain poised in intimate extremity and extreme intimacy. To let the taste of difference linger in our mouth, unseasoned, wild as a hawk’s wing.
Chapter 4

An Archipelago of Enchanted Forms: Melville’s Galapagos

“...as a Paradise of flowers, not a Tartarus of clinkers

If Luther’s day expand to Darwin’s year,
Shall that exclude the hope – foreclose the fear?
Melville, Clarel (4.35:1-2)

1. From the chain of being to the tangled bank

In 1909, John Dewey celebrated the centenary of Darwin’s birth and the 50<sup>th</sup> anniversary of The Origin of Species with a lecture at Columbia University entitled “The Influence of Darwinism on Philosophy.” In it, he summarized what he saw to be Darwin’s fundamental importance:

In laying hands upon the sacred ark of absolute permanency, on treating the forms that had been treated as the types of fixity and perfection as originating and passing away, the “Origin of Species” introduced a mode of thinking that in the end was bound to transform the logic of knowledge, and hence the treatment of morals, politics, and religion (Appleman 305).<sup>150</sup>

We must keep in mind, however, that Darwin did not invent or discover evolution.<sup>151</sup>

Already by the year 1800, philosophers and natural scientists were rethinking the natural theological world-view in which natural phenomena were thought as fixed, perfect symbols of God’s immanent creative power. In this natural theological worldview, all of nature could be placed on a predetermined grid according to God’s plan – a Great Chain of Being. Or, in Dewey’s rich phrase, “the sacred ark of absolute permanency.” Where scientists had long ascribed to divine will the force that guides all of life through its changes, Darwin, through careful observation, came to determine this process through the figure of natural selection. This, in effect, is Darwin’s achievement: he did not merely
show that things change – which was apparent to all who experience our breathing world of births and deaths – but provided evidence for the mechanism of organic change in material, physical terms. Through natural selection, Darwin showed every history to be a living history; organic history is alive within us and ongoing. Again, as John Herman Randall, Jr. stresses, this is the point emphasized by Dewey in his lecture: “Change [is no longer] a sign of defect and unreality, but fundamental in all that exists. Knowledge and science can no longer aim at realities behind and beyond processes of nature, but rather at mutual interactions of changing things; not an Order of Nature, as 17th and 18th – century science had aimed, but at events. Situations. Processes” (Appleman 314).

The contention here is that Herman Melville, a contemporary of Darwin, likewise registers this transformation in the logic of knowledge. From his natural-historical observations in Typee, his extended discourses on cetology in Moby-Dick, to his rethinking of the possibilities of a new life for “dumb Nature’s train” to emerge from the petrified landscapes of Clarel and his later poetry, Melville’s writing undertakes a deep engagement with natural science and philosophy. To be sure, this engagement often put Melville at odds with the scientific ideology of antebellum America. Against those like Louis Agassiz, who persisted in the search for evidence that God had created species as immutable and in place (asserting that species were “a thought of God” and glaciers served as “God’s great plough”), Melville, like Darwin would come to understand the natural world in terms of an unstable, ever changing multiplicity. The work of both Darwin and Melville testifies to this world in process; and, if with major differences, each tries to represent this world through writing. Thus our initial question in approaching Melville’s work – which we will here begin to do in the light of Darwin – will be what is
at stake in attempts to represent or write a world in which nothing is stable, but always on the go, moving, changing, or becoming different. By *Moby-Dick*, this is already a big problem for Melville, namely the problem of how to fit a whale in a book.

Against others who made similarly passionate attempts to marry science to religion by allying gains in science with new methods of biblical criticism – thus continuing the work of natural theology – Melville right away insists that *Moby-Dick* will not be your “gospel cetology.” It will be neither the biblical cetology of Jonah, nor the standard scientific cetology, but will come to inhabit the tense in-between of these. Rather, Melville will attempt to “take hold of the whale bodily, in [its] entire liberal volume, and boldly sort them that way.” Here the French natural historian Cuvier’s definition of the whale as a “mammiferous animal without hind feet” which Melville cites in his “Extracts” to *Moby-Dick*, falls dramatically short. Life exceeds any ability to pin it into a classificatory scheme. Representational language is insufficient to write the whale, “the classification of the constituents of a chaos” (116). As Melville says through Ishmael in the “The Tail”:

> The more I consider this mighty tail, the more do I deplore my inability to express it. At times there are gestures in it, which, though they would well grace the hand of man, remain wholly inexplicable...Dissect him how I may, then, I but go skin deep; I know him not, and never will (296).

Inscrutable life cannot be captured by measuring a skeleton, nor by creating a Linnaean table but, as Ishmael continues, “[o]nly in the heart of quickest perils; only when within the eddyings of his angry flukes; only on the profound unbounded sea, can the fully invested whale be truly livingly found out” (348). American poet Charles Olson celebrates Melville’s writing for precisely this reason. As Olson says, Melville is “greater than ever” because of this “approach to physicality,” this ability to, from the
inside, see the “microcosm” for what it is – as movement, force, and velocity” (Olson 116-117).

Yet, as we will see, intense scrutiny of the physical inevitably affects how we understand the metaphysical. We can easily see this by comparing how any historical understanding of nature corresponds to its contemporary theology. To be sure, the physics of Aristotle is founded on the ontology of his metaphysics; universal gravitation in Newton’s mechanical universe indexes at all points to an ubiquitous, omniscient creator; likewise Darwin’s picture of natural change as an organic response to random environmental events voids the possibility of a divine intelligence that guides these changes, and likewise accompanies the secularization and modification of Christianity in the nineteenth-century. Classification schemes, as orders of things, are not merely fixed tools for the knowing naturalist to categorize new or emergent natural knowledge. They give us a picture of thought, or of the structure of thought, that traverses the varied domains of thought. This is Dewey’s point when he says that Darwin’s new mode of thinking “was bound to” transform the “treatment of morals, religion and politics.” So although Darwin’s work focused on the natural history of how actual, particular species evolve over time, the implications of this new understanding of the natural world could not be without repercussions in every area of knowledge: or as Melville would say, in the whole “circle of sciences.” In general, this leads Dewey to posit an “experimental temper of mind” – a way of thinking and experiencing a world in process through the realization that we too are unstable, moving, changing, becoming other than ourselves. We too are part of the process, which we both shape and shapes us. This brings Darwin to the metaphor that closes his *Origin of Species*, the world is a “tangled bank,” “diverse,
sprawling, confusing, yet interconnected, an ecosystem in which each part – plants, animals, worms, men – is dependent on one another as well as the whole” (Darwin 131; Wilson 489-90). This is the scandal of Darwin’s work – humans are thus subject to the same natural laws as all of the rest of nature, in no privileged position above or beyond it. His scrutinizing of the physical world thus does not lead to a corresponding metaphysic so much as it nullifies the metaphysical. It reorients the meaning of the world, not to a different metaphysical set of problems, but into physical events, situations, or processes. At risk of making a reductive generalization, this is one lesson of *Moby-Dick*, too: namely that Ahab’s metaphysical, anthropocentric, monomaniacal quest to dominate the impersonal forces of nature could result only in the dissolution of his personhood; Ishmael, by contrast, moves deeper into the physical, to “unbutton the whale still further. To take hold of the whale bodily, in [its] entire liberal volume.” Through Ishmael, Melville undertakes methods of “classification” or “comparative anatomy” which subvert claims to a natural theological fixed order or representational scheme. Ishmael of the web of affinities, Ishmael of the tangled bank, of the tangled “Bower of the Arsacides.”

It is perhaps of more than merely historical coincidence or symbolic significance, then, that both Melville’s *Typee* and *Omoo* and Darwin’s *The Origin of Species* were published in Britain by the same man, John Murray of London. To be sure, the shared intellectual background for both Darwin and Melville would be enough to allow us to compare how each registers and continues these upheavals in the history of thought. Likewise, to this end, *Moby-Dick* is a rich sourcebook for understanding Melville’s engagement with his contemporary natural science and philosophy. Yet if we take the
Galapagos to be a coincident site for the work of both Melville and Darwin, a site which both visited and about which both wrote extensively, we can look more closely through each at the problems of writing living nature, in the fullness of its physicality, and what these mean for the status of the metaphysical. Each does not just write his own experiences there, but mediates and revises them through a series of intertexts. In Melville's case this includes a “rewriting” of Darwin through which, as we will see, Melville comes to problematize both the ability to represent a living system as complete, as well as the status of the physical-metaphysical relationship. The idea is that Melville will come to inhabit in his later work an intensely physical world marked by the ambiguous possibility of an absent God.

2. A little world within itself – Darwin’s Galapagos

That the Galapagos have become a metonymy for Darwin’s evolutionary theory, almost mythically, goes without saying. Since his visit in 1835, for Darwin this “knot of islands” became a privileged site. Its geology and its natural history provided him with persistent examples for his theory and compelling counterexamples to his detractors. Yet Darwin’s *Journal of Researches* – in later editions becoming known as *The Voyage of the Beagle* – was more than just a record of scientific observations or a travelogue, but a carefully constructed and revised narrative. We should understand Darwin’s texts on the Galapagos, then, as drawing on not only the “text” of his experience, but as mediated through several inter-texts. Darwin took as his models the great explorers and science travelers that came there before him: those who had explored the south seas and reported on the natural history of the area, like Cook, Dampier, and Cowley, and others who had
taken South America generally to be their laboratory, as it was still very much a “new continent” in terms of European scientific interest. Foremost among the latter was Alexander von Humboldt, who traveled across the Spanish Americas in 1799-1804, giving vivid, accurate descriptions of the flora, fauna, and indigenous peoples. Concerning Humboldt, Darwin later wrote: “You might truly call him the parent of a grand progeny of scientific travelers, who, taken together, have done much for sciences” (Humboldt lxii). (As we will see, these will be some of Melville’s primary sources as he too, writes his South Seas adventures). Along with von Humboldt, at the forefront of Darwin’s mind as he encountered new phenomena was the work of geologist Charles Lyell. Lyell’s geology, called uniformitarianism, theorized that geological processes are gradual and ongoing; thus they can be as precisely observed today as they would have been at an initial moment of creation. Put differently, creation is a work in progress by a multitude of interrelated processes. Among these processes was the formation of landmasses, which Lyell understood as arising from the seabed. Just before coming to the Galapagos, Darwin would find direct evidence in support of Lyell’s theory in a high pass of the Andes where he found fossilized remains of sea creatures. The land had risen from the sea. By Darwin’s own admission, he had come to see “through Lyell’s eyes.”

Thus Darwin’s attention, upon first visiting the Galapagos, is particularly attuned to its geology, especially the volcanic processes which were still building the islands. “He could virtually witness the transformation of the earth’s raw materials into a fully diversified topography” (Voyage 21). In September 1835, he writes:

We landed at Chatham island, which like the others rises with a tame and rounded outline, interrupted here and there by scattered hillocks – the remains of former craters. Nothing could be less inviting than the first appearance. A broken field of black basaltic lava is everywhere covered
by a stunted brushwood, which shows little signs of life. The dry and parched surface, having been heated by the noonday sun, gave the air a close and sultry feeling, like that from a stove: we fancied even the bushes smelt unpleasantly. Although I diligently tried to collect as many plants as possible, I succeeded in getting only ten kinds; and such wretched-looking little weeds would have better become an arctic, than an equatorial Flora (269).

Not a very positive description, even given Lyell’s geological perception. Indeed it is the strange otherworldliness of this landscape that most affects Darwin: “The natural history is very remarkable,” he goes on to say, “it seems to be a little world in itself; the greater number of inhabitants, both vegetable and animal, being found nowhere else” (269).

Emerging from this landscape, as if part of it, were the Galapagos tortoises:

The day was glowing hot, and the scrambling over the rough surface, and through the intricate thickets, was very fatiguing; but I was well repaid by the Cyclopean scene. In my walk I met two large tortoises…One was eating a piece of cactus, and when I approached, it looked at me, and then quietly walked away: the other gave a deep hiss and drew in its head. These huge reptiles, surrounded by the black lava, the leafless shrubs, and large cacti, appeared to my fancy like some antediluvian animals (271).

To go to their upland water sources, Darwin reports, the tortoises “methodically” travel along “broad well-beaten paths” which “radiate in every direction from the wells even down to the sea-coast” (277). To Darwin, these creatures never seem to die; even the old tortoises seem to do so only from accidents, “as from falling down precipices” (278). Thus they seemed to Darwin’s fancy like leftovers still clattering on the deck of Noah’s ark. Despite such solemn longevity, however, they wouldn’t be spared from another of Darwin’s habits in investigating species, namely tasting them, as was noted in Chapter 3. However, in the end, it will not be the taste, but the sheer overall number of the reptiles that strikes Darwin: “we must admit that there is no other quarter of the world, where this order replaces the herbivorous mammalian in so extraordinary a manner” (285). It will
be the extraordinary differences he notices among species of Galapagos birds, especially
the famous finches which Darwin will later realize constitute distinct species on the basis
of differences in the structure of their beaks.

So, despite the sterile, crater-scarred shores, the “absence of every member of the
palm family,” (274), the wretched-looking weeds, and even the uninviting habits of the
reptilian population, the variety and palpable creative force of life of the Galapagos is
what will stay with Darwin. As he says in the 2nd edition of his Journal revised in 1845:
“Reviewing the facts here given, one is astonished at the amount of creative
force…displayed on these small, barren, and rocky islands; and still more so, at its
diverse yet analogous action on points so near each other.” We should remember that it
took a few years after his visit to the Galapagos for Darwin to develop his theory of
evolution. Yet in the twenty years from the first publication of his Journal and
Researches in 1839 until the publication of The Origin of Species, Darwin never strayed
far in his mind from the Galapagos. They mark the lesser known texts published during
this interval, several Lyellesque geological tracts and “shorter papers on invertebrate
zoology.” His recollections of the Galapagos remained vivid when he came to question
the taxonomic status of the bird life of the archipelago, and then his famous recollection,
repeated several times in several forms in various publications: “opened first note Book
on ‘transmutation of Species’ – Had been greatly struck from about month of previous
March – on character of S. American fossils - & species on Galapagos Archipelago. –
These facts origin (especially latter) all of my views.” Thus across these texts, especially
the subsequent editions of The Voyage of the Beagle, we could chart how Darwin
rewrites his experiences of the Galapagos as his theory of evolution itself evolves. He
adds these realizations about the distinctness of the species of finches and about the
creative force of the islands. He adds passages about the “fifteen kinds of sea-fish”
which “here are all new species.” What is most notable, however, is that he no longer
shrinks back from bold conclusions. He decisively expands on the passage cited above,
now theorizing how the geography of the archipelago affects the genesis of its life:

The natural history of these islands is eminently curious, and well deserves
attention. Most of the organic productions are aboriginal creations, found
nowhere else; there is even a difference between the inhabitants of the
different islands; yet all show a marked relationship with those of
America, though separated from that continent by an open space of
ocean…The archipelago is a little world within itself… Seeing every
height crowned with its crater, and the boundaries of most of the lava-
streams still distinct, we are led to believe that within a period
geo logically recent the unbroken ocean was here spread out. Hence, both
in space and time, we seem to be brought somewhat near to that great
fact—that mystery of mysteries—the first appearance of new beings on
this earth (Darwin, Voyage (1845), 377-78).

As he began drafting the “Abstract” that would become the Origin of Species, Darwin
had amassed a wealth of empirical examples to support his theory; yet the inhabitants of
Galapagos remained his paradigmatic cases. He had rethought these cases through a
variety of sources, each of which “threw some light” on the “mystery of mysteries.”
Thomas Malthus in particular expanded his notion of transmutation to include variables
such as the available resources that could limit the number of individuals in a population.
Malthus, by displacing the causality of nature away from a final cause, thus provided a
key step for Darwin away from divine design and teleology in his emerging schema. By
his 1856 “Natural Selection” manuscript, whereas there might still remain an “implicit
appeal to some kind of teleological ordering of the process, [t]he action of the “wise
being” of the earlier manuscripts, however, has now been given over entirely to the action
of a selective “Nature.” Nature, he writes, “cares not for mere external appearance; she may be said to scrutinise with a severe eye, every nerve, vessel & muscle; every habit, instinct, shade of constitution,—the whole machinery of the organisation. There will be here no caprice, no favouring; the good will be preserved & the bad rigidly destroyed” (Darwin 1856, in Stauffer 1974, 224–25). Despite the impersonal, aleatoric force of nature as Darwin was articulating it, he still felt compelled to defend the place of the deity in The Origin of Species: “I see no good reason why the views given in this volume should shock the religious feelings of anyone…A celebrated author and divine has written to me that ‘he has gradually learnt to see that it is just as noble a conception of the Deity to believe he created a few original forms capable of self-development into other and needful forms, as to believe that He required a fresh act of creation to supply the voids caused by the action of His laws’” (Appleman 124-5). Yet the implications of his theory, as The Descent of Man would amplify, opened a rift in the history of ideas in which divine providence would be voided in favor of natural selection. Melville could be said to waver in this rift: in the barren desert marked by the flight of god. By Clarel, Melville will ask: “If Luther’s day expand to Darwin’s year, /Shall that exclude the hope – foreclose the fear?” He will ask: “Shall Science then/Which solely dealeth with this thing/Named Nature, shall she ever bring/ One solitary hope to men?” (4.35:1-2; 2.25:154-157). He will ask: “Science and Faith, can these unite?…is faith dead now,/A petrification? Grant it so, /Then what’s in store? what shapeless birth? / Reveal the doom reserved for earth?/How far may seas retiring go? (3.5:64; 79-83). For Melville, as the light of science increased, so would its shadow, a shadow which as we will now turn to see, already lengthens across his Galapagos.
3. Straightforwardness in a belittered world – Melville’s Galapagos

Like Darwin’s, Melville’s travels through the South Seas, including his stopover at Galapagos in 1841, deeply inflected his later writing, providing for it a sourcebook of ideas and figures, as suggested by the title of a section of his late book, *Timoleon*, “Fruit of Travel Long Ago.” One particular fruit of this travel is his series of “sketches,” “The Encantadas, or the Enchanted Isles,” first published serially in 1854 in Putnam’s Magazine and then collected into his *The Piazza Tales* (1856). The “Encantadas” draws on yet another name for the Galapagos: indeed, the isles seemed enchanted when, enshrouded in fog and surrounded by trick currents, the islands themselves would be either invisible to passing ships or themselves seem to move, betraying even the best navigator’s cartographical skill. The structure of the sketches also seems to betray any fixed categorization. Indeed, critics have often had difficulty in understanding how the “structure” of the sketches should be articulated, and to which genre they should be assigned. Are they a collection of travel sketches? Are they fiction? Are they nature writing? Are they an allegory? How do they fit into the “plan” of the *Piazza Tales*?\(^\text{157}\)

Like the islands themselves, Melville’s texts desolately gesture across the Pacific to the faraway Polynesian chain, towards the pleasure gardens of the South Pacific. Comprised of 10 sketches, not only do they function within the archipelago of his oeuvre, but also the sketches themselves form a chain of islands. Unlike Darwin’ thematic and chronological island hopping, Melville’s sketches each relate either to the islands as a group or to an individual island of the Galapagos. They generally follow a trajectory from the geology and zoology of the islands to their recent human history of pirates and outcasts. Across the series of sketches, there are repeating symbols and motifs, and
within each sketch there are fragmentary units tied together under the rubric of the sketch itself. Each sketch opens with an epigraph variously from Edmund Spenser’s *The Faerie Queen*, Beaumont and Fletcher’s comic play *Wit Without Money*, or other works by Thomas Chatterton and William Collins, mostly Renaissance authors, then, writing in the period of early exploration and piracy. A significant link between “The Encantadas” and Shakespeare’s *The Tempest* becomes apparent when we consider the name of the islands-sketches in the light of the series of rewritings and restagings *The Tempest* underwent throughout Restoration and eighteenth-century England. These include John Dryden and William Davenant’s 1667 *The Tempest, or the Inchanted Island*, Thomas Shadwell’s 1674 *The Tempest, or, the Enchanted Isle*, Thomas Duffet’s *The Mock Tempest, or, the Enchanted Castle* the same year, up to John Kemble’s 1789 *The Tempest*, which includes elements of many of these previous adaptations. Melville’s own “Enchanted Isles,” displaced to the “far Bermoothes” of the Pacific, could be said to stand at the other end of the chain of *Tempest*-inspired rewritings. Yet, rather than celebrating the age of maritime exploration and colonialism which *The Tempest* inaugurated and ideologically motivated, Melville’s sketches could be said to bear witness to its decay. *The Tempest* bears on the trope of illusoriness as well: Melville’s narrator becomes more than a tour-guide of these enchanted islands, but a sort of poet-pirate-conjurer in the mode of Prospero.

In addition to these texts – there are quite a few – Melville, like Darwin, formed the physical descriptions of “The Encantadas” by compiling and reworking material, from excerpts of historical and zoological documents. Both drew on William Cowley’s 1699 *Voyage Around the Globe* and the writing of British explorer and privateer William Dampier, who both picked up and dropped off the famous castaway, Alexander Selkirk,
on an uninhabited island off the coast of Chile; Selkirk, who spent several years there alone, became the prototype for Daniel Defoe’s *Robinson Crusoe* and would likewise linger in Melville’s imagination as a figure of the *isolato*. As is the case of his other *Piazza* tale, “Benito Cereno,” “The Encantadas” include material from Amasa Delano’s *A Narrative of Voyages and Travels* (although “The Encantadas” is derived from Chapter 20, whereas the plot of “Benito Cereno” comes from Chapter 18); James Burney’s *A Chronological History of the Discoveries in the South Sea or Pacific Ocean*; James Colnett’s *A Voyage to the South Atlantic and Round Cape Horn into the Pacific Ocean*; Captain David Porter’s *Journal of a Cruise Made to the Pacific Ocean* (a text also used in *Typee*). By naming the texts that Melville uses as source material, the goal is thus not merely to undertake a scholarly archaeology – or an “antiquary geology,” as Melville writes, of “The Encantadas.” Instead it is to emphasize Melville’s process of writing the Galapagos as a ravaging of source material, including his own experiences, a creative destruction and restructuration, a collecting or connecting of fragments, that, as we will see, is both allegorical and metonymical.

First, and most significantly for our purposes, Melville’s “Encantadas” also draws on Darwin’s *Journal of Researches*, which he also cites as among the “Extracts” of *Moby-Dick*. Like Darwin, Melville begins with a description of the uninviting, sterile physical landscape, as built upon burnt-out ruins, on ashes or cinders, and littered with various detritus. Yet Melville extends the conceit to render “The Encantadas” in terms of a Dantesque “fallen world,” one littered with the scoriae of Milton’s infernal regions, yet given to the enchantments of the “Wandering Isles” of Spenser’s *Faerie Queen*:

Take five and twenty heaps of cinders dumped here and there in an outside city lot; imagine some of them magnified into mountains, and the vacant
lot the sea; and you will have a fit idea of the general aspect of the Encantadas, or Enchanted Isles. A group rather of extinct volcanoes than of isles; looking much as the world at large might, after a penal conflagration (99).

They are a fallen land, whose “special curse” is “neither the change of seasons, nor of sorrows” (99). Their desolation is not a barren Polar desolation, but an excess of its equatorial position, cut by the line. They are marked by their “emphatic uninhabitableness”; even the Jackal, the dog of night and death, the dog that roams the tombs, will not stay here. “It is deemed a fit type of all-forsaken overthrow,” Melville writes, “that the jackal should den in the wastes of weedy Babylon; the Encantadas refuse to harbor even the outcasts of the beasts.” He agrees with Darwin’s assertion concerning the predominance of reptiles: “Little but reptile life is here found: tortoises, lizards, immense spiders, snakes and that strangest anomaly of outlandish nature, the iguana. No voice, no low, no howl is heard; the chief sound of life here is a hiss” (99). To this end, Melville compiles a mock species chart whose taxonomy of outcasts probably has more in common with Borges’ “Chinese Encyclopedia” than with Linnaeus, Buffon or Darwin’s own chart of the distribution of Galapagos plants:

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<td>Men</td>
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<td>Anteaters</td>
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<td>Man-haters</td>
<td>unknown</td>
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<tr>
<td>Lizards</td>
<td>500,000</td>
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<td>Snakes</td>
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<td>Spiders</td>
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<td>Salamanders</td>
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<td>Devils</td>
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<td>11,000,000</td>
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These “outcast” creatures endure and shape the Plutonian shores of the Galapagos. They are complicit with its ongoing entropy:
Those parts of the strand free from the marks of fire, stretch away in wide level beaches of multitudinous dead shells, with here and there decayed bits of sugar-cane, bamboos, and cocoa-nuts, washed upon this other darker world from the charming palm isles to the westward and southward; all the way from Paradise to Tartarus; while mixed with relics of distant beauty you will sometimes see fragments of charred wood and mouldering ribs of wrecks (100).

Even the unburned patches of coastline are marked by decay and disorder, anticipating the lines from Melville’s late poem, “Syra,” in which the cast-off material “Lay orderless in such loose way /as to suggest things ravished or gone away.” Here remnants of Paradise have literally washed up on the Tartar’s shores, as “relics of distant beauty” mix with “charred wood and mouldering ribs of wrecks.” The duplicity of the islands as ostensibly young islands, newly born from the womb of the sea, yet deeply marked by death and destruction, reiterates this. The birth of oceanic islands gives us a figure for Melville’s sustained exploration of the contrariness or ambiguity of the creative process; the ambiguity of life washed up on the shores of death. Likewise, he blends tragic and comic elements to further blur the tones and tonalities which comprise his sketches.

This ambiguity is joined to the “Encantadas” living inhabitants. The Galapagos tortoise, as in Darwin’s “Cyclopean scene,” is inextricably linked to its solitary geography. The name “Galapagos” itself comes from a type of Spanish riding saddle that resembled their shell, which in turn gave its name to islands themselves. The tortoises become tropic figures for the islands, and in turn entropic figures of the slow processes of change and movement on them. They are living, perduring emblems of the earth’s own processes of formation, a combination of the contrasting late eighteenth-century theories of Neptunism (that the earth was formed primarily by crystallizations of ocean-borne minerals) and Plutonism (or Vulcanism that the earth arose from volcanic outbursts).
Their slow gestures are probably more suited to the gradualist epochal or tectonic movements (if not eternal damnation) that Charles Lyell’s uniformitarianism proposed; at the same time that they seem leftovers – like the islands themselves – of violent volcanic eruption. They are creatures of both “wonderful longevity” and “lasting sorrow and penal hopelessness” (102). They are Melville’s *memento mori* – spectral reminders of humanity’s fleeting mortality in the midst of the span of life. Indeed, part of the “enchantment” of the islands, as Melville’s narrator tells us, comes from the “earnest belief” that “all wicked sea-officers…are at death (and in some cases, before death) transformed into tortoises; thenceforth dwelling upon these hot aridities, sole solitary lords of Asphaltum” (102). Due to the “vividness” of the narrator’s memory or the “magic of [his] fancy,” this reminder can return at any time, whether out in the lonely woods of the Adirondacks removed from the far-distant South Sea rovings, or among the shadows of scenes of “social merriment”:

I have drawn the attention of my comrades by my fixed gaze and sudden change of air, as I have seemed to see, slowly emerging from those imagined solitudes, and heavily crawling along the floor, the ghost of a gigantic tortoise, with “Memento * * * * * ” burning in live letters upon his back (102-103)

This *memento mori*, as graphically presented by Melville, is emblazoned on both the back of the turtle and onto the face of the page. Its series of asterisks evokes an archipelagic form itself, in which the process of life is always at risk of death. The tortoise is not a voluntary memory or a souvenir of the South Seas; rather it slips in unnoticed, involuntarily, as if washed up all of the sudden on the shoreline, but each time with an initial shock, the jolt of mortality in life. As graphical marks these asterisks open a space of elliptical uncertainty. We become unsure whether they constitute a mark to be read or
deciphered, or a series of marks which cover a word that must for reasons unknown remain omitted. Thus this graphical form of the *memento mori* works out of the interstices of language; its asyntacticality confounds language’s representative capacity.

As Melville insists in the Second Sketch, the tortoise is not merely a symbol for death – there are, in fact, “two sides to a tortoise” (103). The tortoise is rather “both black and bright” (104). It holds in its physiognomy the dynamic tension of Paradise and Tartarus, of nature and uncanniness, ancientness and new birth. Once again they have an unusually enchanting effect upon the narrator: “These mystic creatures, suddenly translated by night from unutterable solitudes to our peopled deck, affected me in a way not easy to unfold. They seemed newly crawled forth from beneath the foundations of the world. Yea, they seemed the identical tortoises whereon the Hindoo plants this total sphere” (104). Here Melville extends Darwin’s conceit of the antediluvian tortoises; they bring Melville’s narrator: “[b]oth in space and time…somewhat near to that great fact – that mystery of mysteries – the first appearance of new beings on the Earth.” The narrator envisions himself riding the tortoise in a dignified Hindu procession: “in a dream I found myself sitting cross-legged upon the foremost, a Brahmin similarly mounted upon either side, forming a tripod of foreheads which upheld the universal cope” (106). The way in which the tortoises really “uphold the universal cope,” however, soon becomes apparent in Melville’s bathic counterpoint at the end of the sketch. Any ponderous solemnity of the tortoises as they have so far been sketched is soon undercut the following night at dinner when the narrator and his shipmates make a “merry repast” from tortoise steaks and tortoise stews. The dignity of the asterism of holymen in procession gives way to a carnal feast of camaraderie.
For Melville, the figure of the tortoise, however, is not constrained to merely the sketches in which it is the “main character.” In subsequent sketches, Melville uses the tortoise as a continuing trope structurally homologous with the other solitary figures that populate the archipelago. In Sketch Eighth “Norfolk Isle and the Chola Widow,” for example, Hunilla’s abandonment and sadness are directly tied to tortoises. A French whaler initially leaves her there with her husband and her brother in order to hunt for tortoises to procure meat and oil. However, due to their elation from a successful hunt, the two men set carelessly off for a pleasure sail, during which their small craft capsizes and both drown. This leaves Hunilla a “lone shipwrecked soul” (132). The French whaler subsequently never returns, condemning her to silently witness the interminable and hopeless passing of the days, like “tortoises creeping through the woods” (133). This is further dramatized in Melville’s description of Hunilla’s dwelling, nearby to which are intermixed living, hostage tortoises and the remains of those the men had killed for oil:

Tied among the thickets were some twenty moaning tortoises, supplying Hunilla’s lonely larder; while hundreds of vast tableted black bucklers, like displaced, shattered tombstones of dark slate, were also scattered round. These were the skeleton backs of those great tortoises from which Felipe and Truxill had made their precious oil (135).

Both the captured tortoises and the skeleton backs of others, “like displaced, shattered tombstones of dark slate” serve as constant reminders for Hunilla’s loss. Like the tortoise, the Chola widow becomes a *memento mori* in slow time; she undertakes Crusoe-like practices of measuring time. When rescued, like Selkirk who has forgotten how to speak, she can only retain the silent, stoic poise of the tortoise. She witnesses to her tragedy as unspeakable, and the narrator follows her in due respect, omitting her trauma from the retelling. Her silence fills the space of the narrative like the elliptical asterisks
on the tortoise’s back: each left undone because death is still to come, a final chapter yet unwritten.

In Sketch Ninth, “Hood’s Isle and the Hermit Oberlus,” the tortoise is used as a means of dramatizing the bizarre, tyrannical characteristics of the Hermit Oberlus. In this sketch, Melville returns to his sardonic best. Save for the occasional visitor from the sea, at first the only companions of Oberlus are the “crawling tortoises” to whom he “seemed more than degraded to their level” (140). He shares the tortoise temporality, save only to slow it to a deeper stupor of drunkenness. Yet soon his autocratic ambitions outrun his hermetical ones, ambitions that make him most low; these, in Melville’s rendering, make it unclear what separates the man from the reptile: “[i]ndeed, the sole superiority of Oberlus over the tortoises was his possession of a larger capacity of degradation; and along with that, something like an intelligent will to it” (140). “He acted out of mere delight in tyranny and cruelty, by virtue of a quality in him inherited from Sycorax his mother” (809). The Hermit Oberlus thus becomes a part Caliban and part Crusoe, part man and part reptile; he tries to deceive and dominate everyone that steps foot on his island. He kidnaps and enslaves a black man, his ironic Friday, and ties up his other visitors until their ships leave without them. In his paranoia he is always prepared to fire his blunderbuss “which by its blind scatterings of all sorts of boulders, clinkers, and other scoria would annihilate [any] mutineers” (141). He becomes a lizard-king, with his subjects as “plebian garter-snakes to this Lord Anaconda” (143).

Melville, rather than simply presenting the peculiar habits of the tortoises, explores their metaphoric and metonymic potential, a potential which science usually deems suspect and tries to exorcise from its understandings of phenomena. For Melville,
the tortoises become synecdoches for the archipelagic island – each tortoise is a fragment, and each a container of contraries. Each implies the set of archipelagic figures that “inhabit” “The Encantadas”: the Chola widow, the Hermit Oberlus, the dogs, the “clinkers,” its runaways, castaways or isolatos, which Melville describes in the later sketches. Each becomes a figure of solitariness, but constellated as a community of solitaries. Each is a fragment within a stream of fragments. Any attempts at hierarchy among the organic or even the inorganic crumble leaving, at best, shared similitudes of enchantment, or at worst grotesque hybrid-bodies like that of Oberlus. Melville’s nature vision in “The Encantadas” thus becomes a blurred vision, as distinctions between species move in and out of focus. It entails a refracted perspective that can see each fragment in itself but also all of the islands of textual body. To see each in this way, as Gilles Deleuze says of the “The Encantadas,” “requires a new perspective, an archipelago-perspectivism that conjugates the panoramic shot and the tracking shot”(87). Such seeing might avoid what Melville calls the “crowning curse” of the tortoise, “their drudging impulse to straightforwardness in a belittered world” (105).

4. To show the multitude
As with Darwin, the panorama of life in the Galapagos is not only restricted in Melville’s text to the descriptions of the tortoises or other “outcast” reptiles. The tortoise is but one member of Melville’s menagerie. In the scenes of “The Encantadas” which deal with “Rock Rodondo” (i.e. the 3rd and 4th Sketches), Melville’s narrator offers us a varied natural historical picture of the life of the island – and at times parodies Darwin. To be sure, Darwin presents the birds of the Galapagos (even many new to him or heretofore “undescribed”) in terms to be easily integrated into typical scientific rationalist discourse.
He remarks on their “general characteristics”: their structure, habits, plumage color and even tone of voice. Although they are peculiar to the archipelago, he relates each to known species: “A buzzard, having many of the characters of Polyborus or Caracara…Three species of tyrant-flycatchers—a form strictly American…A finch, with a stiff tail and a long claw to its hinder toe, closely allied to a North American genus…A swallow belonging to the American division of that genus…A dove, like, but distinct from, the Chilian species, [etc]” (Voyage 275-6).

Melville’s narrator begins in a similar mode of scientific discourse: “I know not where one can better study the natural history of strange seafowl than at Rodondo. It is the aviary of Ocean. Birds light here which never touched mast or tree; hermit-birds, which ever fly alone; cloud-birds, familiar with unpierced zones of air” (108). The narrator proceeds to give us a “shelf-by-shelf” description of the aviary of the rock, in a way that spatializes its flying specimens as if in a naturalist’s cabinet. It would seem, then, that Melville, rather than imposing an arbitrary classificatory scheme, follows the one which nature has presented. As he says in observing the birds of Rock Rodondo: “[a]s we still ascend from shelf to shelf, we find the tenants of the tower serially disposed in order of their magnitude” (109). But quickly any claims to rational order dissolve in Melville’s hands into a grotesque parade of nature’s misfits, or “orphans of God.” At base is the black and white penguin, which stands awkwardly erect like man, “outlandish” and “grotesquely misshapen”; “[a]s if ashamed of her failure, Nature keeps this ungainly child hidden away at the ends of the earth, in the Straits of Magellan, and on the abased sea-story of Rodondo” (109). Above it is the “pensive” but “penitential” pelican, which “powdered over with cinders,” “haunt[s] the shores of the clinkered
Encantadas, whereon tormented Job himself might have well sat down and scraped himself” (109). Slightly above is Melville’s “grey” albatross, an “unsightly, unpoetic bird, unlike its storied kinsman, which is the snow-white ghost of the haunted Capes of Hope and Horn” (109). Atop the Rock, and in counterpoint to the silent ponderous tortoise and the voiceless “hiss” of the reptiles transcribed in the earlier sequences, the narrator presents us with cacophony of bird-noise: “As day advances the dissonant din augments. With ear-splitting cries the wild birds celebrate their matins. Each moment, flights push from the tower and join the aerial choir hovering overhead, while their places below are supplied by darting myriads.” The socius of birds enacts the morning-symphony of landscape as a “demoniac din.” Their persistent to-ing and fro-ing further disorders the grey morning, until the rock is left solitary; “band after band” the birds abandon it to “forage the deep for their food” (110). Thus the multitude of birds resists becoming an ordered structured whole or fixed system of classification; instead it disperses further leaving behind only an accretion of guano – white birdlime rendering the rock indistinguishable from a passing sail. Likewise in the natural aquarium at the base of Rock Rodondo, underwater swarms of fish speak to the duplicity of the sea as both a dull, lifeless expanse and at once full of life, the sea as a “fertile desert”:

Below the water line, the rock seemed one honeycomb of grottoes, affording labyrinthine lurking places for swarms of fairy fish. All were strange, many exceedingly beautiful, and would have well graced the costliest glass globes in which goldfish are kept for a show. Nothing was more striking than the complete novelty of many individuals of this multitude. Here hues were seen as yet unpainted, and figures which are unengraved (110).

Although “many hued,” as unpainted or unengraved, the fish remain outside any anthropocentric grid. They do not exist for science, except in the blankness of the table,
in the openness of the map. As with Melville’s depictions of whales in *Moby-Dick*, the fish of Rock Rodondo remain “unpainted to the last.” They are thus apropos of the series of “sketches,” as “The Encantadas” are labeled, themselves unfinished and unintegrated into any systematic completeness.

In these uncharted regions, human has not yet met fish, neither has fish met human – nor grown distrustful of humanity. As Melville writes:

> To show the multitude, avidity, and nameless fearlessness and tameness of these fish, let me say that often, [that] no sooner did the hook [of our anglers] touch the sea, than a hundred infatuates contended for the honor of capture. Poor fish of Rodondo! in your victimized confidence, you are of the number of those who inconsiderately trust, while they do not understand, human nature (110).

Melville’s ironic passage inverts our standard understanding of wildness: wildness here indicates an unconditional, if indifferent trust, and thus a “tameness” on the part of the fish. Usually, as the story goes, it is humans who must be distrustful of “wild” animals until they become our domesticated loyal companions. The fish here are so naïve vis-à-vis “human nature” that they beg to be captured; so many fish immediately swarm the line that the fishermen cannot get at the slower, larger, and deeper-divers. Here again, he borrows from Darwin, as well as from his own *Typee*. In *Typee* he wrote: “The birds are also remarkably tame...I remember that once, on an uninhabited island of the Galapagos, a bird alighted on my outstretched arm, while its mate chirped from an adjoining tree. Its tameness, far from shocking me, as a similar occurrence did Selkirk, imparted to me the most exquisite thrill of delight I ever experienced” (247-248). The effect of tameness for the narrator, unlike Selkirk, is a jolt of delight at the fact that there can be such interspecies confidence. However, Darwin’s scene of tame Galapagos birds underscores humanity’s cruelty towards them:
Cowley (in the year 1684) says that the “Turtledoves were so tame, that they would often alight on our hats and arms, so as that we could take them alive, they not fearing man, until such time as some of our company did fire at them, whereby they were rendered more shy.” Dampier also, in the same year, says that a man in a morning's walk might kill six or seven dozen of these doves… It is surprising that they have not become wilder; for these islands during the last hundred and fifty years have been frequently visited by bucaniers and whalers; and the sailors, wandering through the wood in search of tortoises, always take cruel delight in knocking down the little birds. These birds, although now still more persecuted, do not readily become wild… It would appear that the birds of this archipelago, not having as yet learnt that man is a more dangerous animal than the tortoise or the Amblyrhynchus (the Galapagos marine iguana), disregard him, in the same manner as in England shy birds, such as magpies, disregard the cows and horses grazing in our fields” (*Voyage* 288).

Thus, again, we see how both Melville and Darwin merge source material to write the Galapagos, but in so doing, also alter it into something new. In this case Melville overwrites not only the experience of his own narrator in *Typee*, but also that of Darwin quoting Cowley. Thematically, we find Melville mixing the two scenes to accommodate the understanding of nature he has come to by “The Encantadas.” That is, birds or fishes, as yet unpainted or yet unengraved, are not “wild” because of some intrinsic qualities of their own behavior, but only in relation to the actions of humanity. The measure of the “exoticness” of a place, especially such an “enchanted” place as the Galapagos, then, is that it is filled not so much with wild beasts, but with tame ones. To allow animals to be tame (as opposed to “taming” them) further voids them from the dominating, domesticating economies of naming or classifying.

Melville’s presentation of the multitude of Rock Rodondo becomes, in François Specq’s terms, a “grotesque classification of natural history” (Specq 155). As such, it calls into question the possibility of scientific knowledge, especially as understood
through classic notions of form and perception – the tools Darwin uses to write the

Galapagos. As Specq writes in “Prophecy and the Grotesque in ‘The Encantadas’”:

This description is a surreal parody of scientific-naturalistic discourse, emphasizing the impossibility of a rational knowledge that is fleeting by nature. Melville’s series of sketches of the Encantadas parodies the encyclopedic approach, the forms of knowing, the better to emphasize the impossibility of knowing and thus to acknowledge the ultimate reign of the formless. Given the unintelligibility of man and nature, any idea of scientific transactions appears as vain and corruptible…The narrator employs the rules of encyclopedic style in order to mock them: this world in trompe-l’oeil shall have an encyclopedia in trompe-l’oeil (155).

To be sure, Melville’s engagement with natural science continually foregrounds nature’s “inscrutability.” His poetic, if grotesque classifications of the creatures of the Galapagos do not fit into any fixed order or representational scheme. Even supposedly “wild” creatures subvert their characterization as indifferent to anthropocentric methods of understanding them. As Specq marks, this is a failure of scientific knowledge in its transaction with the world, if not a failure of perception (calling for an encyclopedia in trompe-l’oeil) as well as an acknowledgement of the intrinsic formlessness of natural knowledge. Yet, this has a further implication, and one in which we can find Melville most pointedly registering the metaphysical problem for Darwin’s understanding of the physical. Specq thus continues in a way that bears repeating in full:

[N]atural creatures disconcert us by their non-compliance with distinctions of species or even genus. The grotesque metaphor of the classification of the animal kingdom suggested by Rock Rodondo [attacks] the central tenet of natural theology, the existence of an immanent order in the world…Every creature seems an orphan of God in this world of “The Encantadas” – a universe of dereliction from which God has disappeared, perhaps forever. God’s withdrawal puts the intelligibility of the world at risk. How can man make sense of a world without God? Darwin basically postulates that the world has a meaning, although a very different one from that of natural theology. In Darwin’s world there are no monsters.
Although this new world is resolutely non-anthropocentric (man is no longer the center of the Darwinian universe, but one element among others of an animal kingdom marked by processes of differentiation) and virtually God-less, the Darwinian revolution does not discount the intelligible, but seeks to restore it as based on a new understanding of nature. In “The Encantadas,” as if God has disappeared as a point of anchorage and reference, nature has not replaced him. Neither God, nor nature: Melville’s universe is decidedly that of the in-between, just as if Melville resided in the empty space created by a wavering of meaning. The great and fundamental difference between these two authors’ worlds is that Melville has not yet closed the book on the idea of the centrality of the divine, while Darwin undertakes to reestablish meaning in the world on a new basis. With Melville, everything continues to point towards a missing but still hoped-for God. Differently from Darwin, Melville’s description of the Encantadas, even if a parody, is carried out in an anthropocentric mode which is also theocentric. Not that God’s grandeur is manifest in the world; rather, his withdrawal from it is proclaimed. God’s negative presence still amounts to a centrality (Specq 155-57).

In “The Encantadas,” Melville not only attempts to render the physical as physical (as Ishmael longs to do in Moby-Dick), but also the metaphysical as physical: each creature – each orphan of God – is a grotesque hybrid, remnants of Paradise wash up on the plutonian shores of Tartarus, living creatures become light-dark mementi mori.

God’s “negative presence” will become ever more intense in Melville’s later work. In Clarel, Melville will work to reinscribe the ambiguities of spiritual life into that of the living flesh, or obdurate stone on a much larger scale. In the canto of Clarel called “The Island,” Melville again revisits the Galapagos; yet here, instead of remnants of the Holy Land washing up on the Galapagos’s shores, or being imposed onto natural creatures as with the penitent pelican, it is instead the blank topography of the Judean desert that puts the narrator of the poem in mind of the “barren steeps” of that archipelago he once visited, and the dull, hopeless eyes of its monstrous tortoise. This reverie brings him to ask the central epistemological question of the work: “What may man
know?…But solve the world! Scarce that he’ll do: Too wild it is, too wonderful” (Clarel 4.3.114-8). Melville wavers in this space where the world remains unintelligible, too wild to know, the ambiguous space between the physical and metaphysical. This space is perhaps best described by Nathaniel Hawthorne in recollecting a meeting with Melville in 1856 near Liverpool: “Wandering to and fro over these deserts, as dismal and monotonous as the sandhills amidst which we were sitting. He can neither believe nor be comfortable in his unbelief.”¹⁵⁸ This world of ambiguity is the world Darwin and Melville have left us, a world neither anthropocentric nor nonanthropocentric, neither enchanted nor disenchanted, neither intelligible nor unintelligible, neither dark nor only light. It is rather an archipelago world of an open-ended series of “ands”…and…. and…and. “A wall of loose, uncemented stones, where every element has a value in itself but also in relation to others: isolated and floating relations, islands and straights, immobile points and sinuous lines – for Truth always “has its jagged edges” (Deleuze 86). A Paradise of flowers and a Tartarus of clinkers.

5. Isles of Absentees

In Melville’s late poem “The Archipelago” from the series Timoleon, we find another desolate topography indelibly marked by the absence of ancient gods.

Sail before the morning breeze
The Sporads through and Cyclades,

They look like isles of absentees –

Gone whither? (Robillard Poems, 334)

The Sporads,¹⁵⁹ scattered like seeds across the Aegean, and the Cyclades, the ring around Apollo’s Delian birthplace, each echo back across Melville’s oeuvre to the Polynesia of
his early narratives and romances: the Marquesas of Typee, the Society Islands of Omoo, the “floating nations” of the Mardian chain, etc. Yet the Greek islands of “The Archipelago” are no longer the redolent South Sea paradises of Melville’s youth, nor are they the populous flower-beds of Hellenic civilization when “Theseus roved a Raleigh there./Each isle a small Virginia fair –/Unravished” (334). These groups of islands are now but a tenantless, wasted terra arida, and seem to only serve as dire counter-examples to their former glories. The modern visitor might “bless Apollo’s cheering ray,” but at present there is not even a lone, castaway Selkirk “there to pray” to the Delian oracle (334). The gods have been all but expelled from their former precincts. All that has survived “ravishment” (or “havoc”) on these isles is their “grace of form” – the blank clarity of an empty Apollonian aesthetic, the uncolored picture-frame wherein Pan once led forth the “revelry of life.” There is, as Melville describes in another poem from the Timoleon sequence, “The Attic Landscape,” “Little here of ‘Old Romance,’/Or Picturesque of Tivoli./No flushful tint the sense to warm–/Pure outline pale, a linear charm.”(57). Despite the residual grace and beauty in the primal, terrestrial form of the islands, they can only be described in terms of their absences: the Sporads and Cyclades are “Polynesia reft of palms,” without balm, calm or perfume of the tropics. “Not such as musk thy rings of calms, /Marquesas!” (l.21-24). Classical form and beauty become bleached or reduced to a ruined fragmentation; they are sterilized and odorless. Like the sculpted god Melville ironically portrays in “Disinterment of the Hermes,” they become “lost in sediment and drift” in the “alluvium” of Greek rivers. The decadence of a civilization without god has been laid out, as Melville describes in yet another poem from
“Timoleon. “Syra” (a “Transmitted Reminiscence”), “like plunder on a pirate’s deck/Lay orderless in such loose way/As to suggest things ravished or gone astray” (334).

Yet, Greece, a lifeless pile of stones, is not merely contrasted to an exotic, fertile Polynesia; rather the two sites are superposed in “The Archipelago.” Across the surface of the poem, the two spaces become “coincident” and therefore are in a sort of unresolved tension with one another. This is accentuated by Melville’s claim that the two sets of islands are reminiscent of each other (or come to resemble each other) only by being ravaged – i.e. only as “reft of palms,” breathless or comfortless (“Seaward no valley breathes her balms”), or odorless (“Not such as musk thy rings of calms”). Melville superposes alighted-upon islands not to draw similarities, but to push similarity to the point of rupture. Similarity becomes measured by what is “reft.” The form of the archipelago, then, both here and as more broadly drawn throughout his work, works for Melville as a dynamic holding-in-tension of fragmentary and often divergent elements or experiences. The archipelago conveys the sense of an ongoing process, of new formations, of new islands in the chain. It is the extension of similarity into difference.

By layering the Marquesas onto the Sporads and the Cyclades, (or the Galapagos onto Judea as he had in “The Island” of Clarel), Melville is neither attempting to formalize or complete his early experiences through writing, so to “bring them full circle,” nor to integrate them and to close them. The form of the archipelago instead becomes a palimpsest on which Melville writes, or writes-over his experiences. The islands in question are not merely sites of memory or experience, of simple nostalgia or simple commemoration. They are sites of the reopening of experience, even if this experience is the registration of profound loss, the flight of god. They are “transmitted
reminiscences.” Melville’s writing thus does not constitute an attempt to impose a form onto experience, but rather becomes experience’s perpetual unmaking – its “ravishment.” This compels us to understand genre on the basis of genesis rather than on formal markers of division. As in “The Encantadas,” the genre called “lived-experience” becomes another source-text to be de-structured and set adrift. Writing dissolves experience and allows it to become something other than itself. Re-collection is neither the repetition nor the internalization of a personal or collective past; instead it is a perpetual collecting through which novel thematic emphases or transient concentrations of thinking can emerge. Melville’s writing in this manner would become less a series of personal or historical data than a persistent plea to escape or start over.

The place of the Galapagos, or Greece, Judea, or the Marquesas emerges not so much as fixed localities, but as the site of an ongoing rewriting, a serialization of erasures. In each case, “place” becomes a metonymy for “elsewhere.” This rewriting of place happens at the sharp edge of a type of memory that does not sculpt a memorial but cut away a space for the new. To rewrite place is to cut new possibilities for thinking it from the stone-face of prior histories, to break them apart, to leave them uncemented. The archipelago evokes this type of writing, one that leaves its elements both uncemented, yet formally held together in its being-held-apart. In this sense it is not a form per se but the constant unmaking of form, a deformation in both extension and fragmentation. In “The Archipelago,” Melville’s writing literalizes the figure of the archipelago as a dynamic jointure of physical and metaphysical, as well as textual, geographical, and epistemological space. More simply, in “The Archipelago,” a series of real and imaginative sites and references converge in the open field of the poem. This
again emphasizes how Melville’s writing puts into dynamic tension several modes of representation, including modes of describing nature. In more extreme terms, these modes mutually dismember. A bacchanal or a “Pan-led revelry” of modes of knowledge. The mutual catastrophe of artistic, theological, philosophical, scientific, and literary knowledge, leaving a only a barren outline, a new blank space of new creation. In this, Melville prefigures a certain interdisciplinary modernity, if not prefigures its inevitable destruction.

Given the centrality of the physical-metaphysical relationship in Melville’s work, it is appropriate to understand this multiplex of modes of representation in tension in terms of allegory. Allegory suggests an isomorphism between objects, persons, and gestures in the work, and meanings that are not explicitly portrayed. At the same time it presupposes a distance between material and meaning, and sets the distance between the two to work. Allegorical transactions of knowledge of the physical world into metaphysical truths are shown to be corrupted. The material world cannot signify metaphysical truth other than the truth of god’s intense absence. In this sense the metaphysical remains physical, even if grotesque. Sharon Cameron, in her work on Moby-Dick in The Corporeal Self: Allegories of the Body in Melville and Hawthorne, approaches the problem of the physical-metaphysical relation in Melville from the other direction – not from Melville’s attempt to have physical forms enact metaphysical truths, but from how Melville strives to inscribe metaphysical abstractions into the physical world. Cameron thus offers the most pointed means to think about what is generally called the “physicality” of Melville’s writing. She posits in Melville (as well as in Hawthorne) a “disintegration” of the distinction between what is “literal” and what is
“allegorical” (Cameron 12). As Cameron writes, Melville and Hawthorne “refuse to accept the definition of the two words as they are commonly understood. They are thus in a particularly strong position to illustrate the fissures and dualisms that are the inevitable consequences of imagining that one could pry the allegorical from the literal, the body from the soul” (12). For Cameron, this leads to another thinking of how writing can be understood as physical presentation, as opposed to disembodied representation. She finds in Melville a relentless “literalization,” or corporealization, of the metaphysical immanent to the physical:

As has probably become apparent by my use of the word literalize, I mean that Melville displaces ideas from explanatory status and confers on them the status of immediacy or palpability, that he poses questions of identity in emphatically physical terms, asking: can things be taken literally? Can they be taken bodily? What would it mean so to take them? Differently put, then, the novel’s tension is between the spirit and the letter, one exegetical in its focus, the other affixed to the bodily thing itself. The novel dramatizes the return to the letter, to the literalization that kills (Cameron 19).

Cameron in effect places the “more primitive questions about identity” in Moby-Dick before that of interpretation in order to work out the manner by which Melville makes immediate or literal the processes of identification and contrariness. This is tantamount to thinking allegory not as an hermeneutical correspondence, but as a materialized, active trope, a scarlet letter across the face of the page. Metaphysical notions such as identity can only be put in physical terms – literalized or corporealized. The sterile landscapes Melville presents in “The Encantadas,” Clarel, and “The Archipelago,” thus register the absence, of god and further void humanity from it – they become isles of absentees, without even a Selkirk there to pray. These fallen lands bear the aspect of allegory which Walter Benjamin details in his text on the origin of German Trauerspiel, in which the
“facies hippocratica of history” becomes “a petrified, primordial landscape. Everything about history that, from the very beginning, has been untimely, sorrowful, unsuccessful, is expressed in a face – or rather in death’s head.” By showing the past to return as a lifeless, “petrified,” landscape, Benjamin not only shows allegory as “the form on which man’s subjection to nature is most obvious” (Newman 232), but he also acknowledges the power of allegory to render the sense of absence opened by temporal distance.\footnote{164} Allegory in its deferring motion (as de Man’s “rhetoric of temporality” makes explicit), at the level of meaning, has the potential to subvert “preconditioned habits of response,” is restlessly future-oriented. It constantly destroys our expectations and creates new ones. The past may return, but it does as a “confiscated past”; meanings are not restored but replaced or reinscribed. As such allegory presupposes intertextuality and simultaneously problematizes its activities of reference (Newman 127). As Maureen Quilligan argues in her *The Language of Allegory: Defining the Genre*, this future orientation resists the vertical conception of allegory and its “emphasis upon disjunct “levels” (28). As Quilligan continues, in a way that resonates with Melville’s allegory in the sketches:

> All reading proceeds linearly, in a word-by-word fashion, but allegory often institutionalizes this fact by the journey or quest form of the plot, journeys which are, furthermore, extremely episodic in nature. It would be more precise to say therefore that allegory works horizontally, rather than vertically, so that meaning accretes serially, interconnecting and crisscrossing the verbal surface long before one can accurately speak of moving “beyond” the literal (28).

“The Encantadas” are not an allegory above, but an allegory across, a spatialization of the rhetoric of temporality whereby meaning becomes another island in the chain of signification. It is not that the physicality of literal space becomes realized at a metaphysical level, but that allegory relentlessly points towards another physicality. This
is the sense of the serialization of erasures that Melville’s work implies. It does not move “beyond the literal,” but instead it reorients itself within the literal; it probes it and dismembers it. It burns the metaphysical letter into the skin of the physical (or perhaps tattoos it). Allegory’s vertical orientation approaches the related tropological and topological figure of metonymy, whereby associative, dissociative displacements work in literal or psycho-geographical space. Or, like the series of guises or deferred episodes that could be said to structure *The Confidence-Man*, the islands themselves provide a spatialized ground (if not a topological/topographical model) for temporal displacement or inner division. This is the system of “writing on credit” Peggy Kamuf proposes. Though her discussion is focused mainly on *The Confidence-Man* (which Melville began not long after the completion of “The Encantadas”), it is relevant for our purposes here: Writing on credit is from the very first a double writing that will deploy its thematic or narrative content as a kind of mask, alibi, or allegory of its own operation... *The Confidence-Man* can be said to be about credit only to the extent that is credited as being about credit, and so forth. Although ultimately any text must apply for such credit, Melville’s would seem to leave little space for doubt that that is what it is doing, at every step. In fact, it is all a matter of steps and spacing, of intervals left suspended between written marks. The interval, space, or suspension is (suspends) the essential mark of writing and fiction, of writing as fiction, that is, of writing as that which demands belief but at the same time suspends it from the credit extended to a future that is always still to come” (172-173).

“Confidence” (as an allegorical abstraction or otherwise) finds its analogue in “The Encantadas” in *arkhe* of “archi-pelago”: *arkhe* is the “governing principle” of the island chain, such that it is its structuring trope, the point on which it turns. A series of confidence tricks only gives the appearance of a unified fictional narrative to the extent that a series of enchantments becomes enchained into an island-chain. As Kamuf
remarks, the idea of structure as a series, or as an “apparent series,” implicates the text itself as well:

If there is a series, then, the text itself would be part of it even as that text also designates the series it in some sense contains. The text “itself” is divided in its limiting trait and this makes for some strange configurations: The whole is also part of “itself”, the title of the series is also one of the members of the set it names in naming itself. What is more, if the text as a whole can be part of a series of swindles, then perhaps it has swindled one into believing that certain characters are swindlers who form a series. In other words, perhaps this title, *The Confidence-Man* is itself a con (171).

Perhaps the same could be said for “The Encantadas” such that their title is itself an enchantment, an apparent repositioning or dissembling before any interpretive vessel or systematic analysis, such that genre and narrative credibility must remain shrouded, and meaning must always stray a little off course.

6. L’Envoi: Melville’s “uncemented stones”

Insofar as each element of the archipelago can never wholly be “itself,” and since whole is always part of itself, every series must be perpetually incomplete, ongoing, etc. This not only bears on the identity of the series, but in turn implies a process of writing history – personal, political, and natural history – that is not so much an imposing of linear chronologies or systematic orderings onto past experiences as it is a re-collecting or re-connecting of them. The past is gathered only as further dispersion: the archipelago as archive is not a fixed repository but the site of perpetual transmutation or repositioning. This opens a new logic of multiplicity, a subterranean classification. This process for Melville is evidenced by his use of historical and biographical material in “The Encantadas” and elsewhere (lines from Cowley, Spencer, and Darwin among others serve as “Extracts” to *Moby-Dick*, for example). Writing becomes an ongoing, open-ended
process of integration and disintegration. It is a ravishing of source material and personal experiences. Not only does Melville ravage these personal or textual sources, but he often re-uses or borrows from his own previous texts. “White whirlpools,” the pen of leviathans, and the figure of the jackal could be said to have been transplanted from *Moby-Dick;* several times the progression from Paradise to Tartarus (or vice-versa) is invoked, a persistent movement that marks many of the *Piazza Tales.* The act of rewriting or over-writing implies an incompleteness or ongoing process. Writing is perpetually displaced; in “The Encantadas,” this incompleteness becomes performed by the sketches themselves.

The archipelago becomes a “remarkable” figure for Melville in that it simultaneously functions as a topography and topology, as a method of writing and a modality of thinking. Such a writing-thinking we could say takes place across a “plane of congruences” – or rather produces a network of congruent figures, which include, if not emphasize a series of transformations of physical geographical figures into written, tropic ones. The multiform transformations of allegory and metonymy, in their interruptive and associative movements, act as flexible models for the intimacy of mind and the place-world. The archipelago is evocative of his constant work of fusing topographical and tropological forms in what could be called Melville’s “earth-writing.” It is a writing that does not rest on comfortable distinctions between the world “out there” and the world of the mind. In Lefebvre’s terms it is a form of the “production of space,” the persistent opening of place to mind and mind to place, the creating of new interlinkages. The place of the mind in Melville, to this effect, is the restless “archipe-logic” of the “and” – or better the “and…and…and…” – the open-ended series whose terms are both contingent
on, and perpetually deform each other. Through such “archipelagic” thinking, Melville thus gestures towards the process thinking and creative evolutionism of James and Bergson; he opens a non-linear, non-successive thinking of the power of relations, an ongoing negotiation, rather than a fixed course. Like Taji in *Mardi*, we find that we have “chartless voyaged” boldly exploring that new world we must always continue exploring, “the world of the mind.” This is a thinking that perpetually propels us to “Sail before the morning breeze” – to get out before the daybreak, to always keep a little ahead.

Deleuze, in his essay on Melville, “Bartleby; or the Formula” draws these points together:

A contemporary of American transcendentalism (Emerson, Thoreau), Melville is already sketching out the traits of the pragmatism that will be its continuation. It is first of all the affirmation of a world in process, an archipelago. Not even a puzzle, whose pieces when fitted together would constitute a whole, but rather a wall of loose, uncemented stones, where every element has a value in itself but also in relation to others: isolated and floating relations, islands and straights, immobile points and sinuous lines – for Truth always has its “jagged edges.” Not a skull but the vertebral column, a spinal cord…But to reach this point, it was also necessary for the knowing subject, the sole proprietor, to give way to a community of explorers, the brothers of the archipelago, who replace knowledge with belief, or rather with “confidence” (86-87).

Melville’s characters thus form a series that cannot be perfectly fused into any one representational system, commonwealth, identity, or resemblance. They are Melville’s “isolatos,” who, as their name implies, are figures of the archipelago. They are never assimilated, but only can become confederated in terms of a series of and…and…and..., by the multiple logic of the etcetera, the ellipse, or perhaps the monkey-rope. Their set includes the series upon series of topographical congruences and structurally homologous figures and tropes which aggregate in Melville’s work. They are the floating relations on
which his work is “built.” Their set expands past his grotesque classifications to the interrelated forms of ships, whales, explorers, brothers, solitary figures (Bartleby, “somewhat of a wreck in the mid-Atlantic”), the aster, and rosary beads, as well as his written extracts, section headings, fore-poems and so on. Their set constitutes The Piazza Tales, in which we are presented with a collection of solitary figures and polymorphous shapes – a set of Melvillean “wandering rocks.” In these stories, it is the solitary, “shipwrecked” figures which are foregrounded. This is evidenced by the figures of Bartleby, the husband in “I and My Chimney,” the Hermit Oberlus and the Chola widow of the “Encantadas,” etc. Each of these “solitaries” becomes coextensive with the isolated building structures in which they dwell, the desolate spaces they inhabit. Throughout The Piazza Tales, the enclosing/disclosing piazza form, in its manifold variations, in its movements between darkness and light, or white and black, serves as a repetitive flexible trope. It is not so much central as immanent; it is extensive into an archipelago of fragmentary, but related forms and deformations. Bartleby becomes coextensive with his brick-enclosed office space and later prison; the sciatic spine of the husband in “I and My Chimney” fuses with the odd-shaped, problem-causing chimney such that both come to irk his wife. Along these lines, Gilles Deleuze, in “Bartleby; or, the Formula,” develops an elegant reading of Melville’s characters in which he shows how each opens a series of affective resonances across the ambient world of the text.

In Deleuze’s philosophical terminology, Melville’s characters are themselves a singularity, a becoming, and as a becoming could be said to open up a “zone of indiscernibility” with these seemingly external elements. He writes:

[A] zone of indistinction, of indiscernibility, or of ambiguity seems to be established between two terms, as if they had reached the point
immediately preceding their respective differentiation: not a similitude, but a slippage, an extreme proximity, an absolute contiguity; not a natural filiation, but an unnatural alliance. It is a “hyperborean,” “arctic” zone. It is no longer a question of Mimesis, but of becoming. Ahab does not imitate the whale, he becomes Moby Dick, he enters into a zone of proximity \([\text{zone de voisinage}]\) where he can no longer be distinguished from Moby-Dick, and strikes himself in striking the whale. Moby-Dick is the “wall, shoved near” with which he merges (78).\(^{166}\)

Thus Deleuze, when speaking of Melville, often provides a series of examples: Pierre’s becoming-woman, Ahab’s becoming-whale, Isabel’s murmurings that reverberate through the house and the guitar. Or, the sparse inhabitants of “The Encantadas” become indistinguishable from the tortoises (as shipwrecked men are said to be transformed into them under the spell of the islands), if not the islands themselves.\(^{167}\) This indistinguishability contributes to the enchanting effect of the place: birds become rocks become sails, sailors and tortoises merge with or emerge from “imagined solitudes” of drawing-room shadow, or Adirondack tree-trunk. The logic of the archipelago allows us to realize that individuality cannot be determinately fixed, but itself is serialized. This speaks to Melville’s “grotesque classifications”: not only the hybrid creatures of Rock Rodondo, but his castaways who each in their own way challenge the definition of the human by opening it to a set of relations external to it. Hunilla’s tortoise-affects, the Hermit Oberlus’s lizard-affects, the Dog-King, even the uncertainty of the narrator as tour-guide-poet-pirate-conjurer-con-man, etc.

In each of Melville’s works we are presented with a set of such figures, a set of “uncemented stones” which seemingly multiply, are by no means finite, and often overflow into other works and stories. We could easily investigate how character comes to pervade the space of \(\text{Clarel}\), as well. The space of the poem – as a written space, as a physical space of desert and rocks, as an imaginative space of striated biblical, mythic,
philosophic, and scientific reference – does not merely serve as backdrop to the movements of the “train of pilgrims,” but merges with them. As characters protract to expansive spaces of productive illegibility, they blur with the mute topography of the Palestinian desert. As with “Bartleby,” they become blank screens or obdurate stones onto which a new philosophical language might be inscribed. As with Billy Budd, they become “indifferent” to all phenomena – to the sea-desert, to a stone, to a man, to a manifestation of light. To this end, Melville’s writing effects an effacement of identity in which identity comes to resonate through these multiple referential registers. Character projects onto the landscapes of the text, scenes of writing and its erasure in which each figure is constantly dis-figuring, becoming other than itself, erasing itself. Successive deformations, or ravishments, become a series of ruptures (of the “knowing subject” of the “sole proprietor.” These emerge from Melville’s writing like volcanoes bursting forth from beneath the sea to form new islands, new beginnings.

After all, the beginning started from God and from a couple, but not the new beginning, the beginning again, which starts from an egg: mythological maternity is often a parthenogenesis. The idea of a second origin gives the deserted island its whole meaning, the survival of a sacred place in a world that is slow to re-begin. In the ideal of beginning anew there is something that precedes the beginning itself, that takes it up to deepen it and delay it in the passage of time. The desert island is the material of this something immemorial, this something most profound (Deleuze “Desert Islands” 14).
Notes

Introduction
1 Deleuze makes this explicit via his understanding of the dispositif in the work of Foucault and Melville, the “tangle, the multilinear ensemble” of moving, multidirectional moving lines: “Great thinkers are somewhat seismic; they do not evolve but proceed by means of crisis, in fits and starts. Thinking in terms of moving lines was the process put forward by Herman Melville, this involved fishing lines and lines of descent which could be dangerous, even fatal. Foucault talked of lines of sedimentation but also of lines of ‘breakage’ and of ‘Fracture.’ Untangling these lines with a social apparatus is, in each case, like drawing up a map, doing cartography, surveying unknown landscapes, and this is what he calls ‘working on the ground.’ One has to position oneself on these lines themselves, these lines which do not just make up the social apparatus but run through it and pull at it, from North to South, form East to West, or diagonally” (Deleuze, “What is a Dispositif?”).

2 i.e. Lucius Caecilius Lactantius Firmianus (c. 240-c.320AD). According to the biographical register compiled in Mather’s The Christian Philosopher, by Winton Solberg, Lactantius was a “convert to and apologist for Christianity. His writings include Diviniae institutiones and De opificio Dei, an attempt to prove the existence of god from the marvels of the human body” (418).

3 To which we could add such “politico-geographical” texts as “To Those Who Would Remove to America” or “Remarks Concerning the Savages of North America.”

4 Yet one should be careful to let Franklin’s stature and populist appeal overshadow the vast natural historical and philosophical work of his fellow Philadelphians, especially that of James Logan and William and John Bartram (with whom Linnaeus undertook a sustained correspondence). See not only the letters to Linnaeus from John Bartram, but also those of John Clayton, Cadwalader Colden, Corrêa da Serra, Peter Kalm, Adam Kuhn, Logan, John Mitchell, and Charles Wrangel.

5 In one particular instance, Jefferson sends Buffon a stuffed New Hampshire Moose, and in the accompanying letter informs Buffon that “I give you their popular names, as it rests with yourself to decide their real names” since the moose is “perhaps of a new class” (Jefferson, “To Buffon,” October 1, 1787, from Writings, pp. 909-910). See also Jefferson’s February 22, 1814 letter “To Dr. John Manners” concerning classification in natural history.

6 As Russell Goodman shows apropos of Cavell’s studies of Emerson and Thoreau, “Cavell argues that Emerson and Thoreau are ‘concerned with an intimacy with existence, or intimacy lost’ (In Quest of the Ordinary 6). In offering their writings as provocations or guides to the recovery of that intimacy, Cavell argues, they serve as ‘philosophers of direction, orienters, tirelessly prompting us to be on our way, endlessly asking us where we stand, what it is we face (Senses of Walden 141-2)”’ (Goodman 100).

7 See Gall’s The Anatomy and Physiology of the Nervous System in General, and of the Brain in Particular, with Observations upon the possibility of ascertaining the several Intellectual and Moral Dispositions of Man and Animal, by the configuration of their Heads (1819). By Gall’s craniometric, skull shape mimicked the form of the brain.

8 Instead Freud posits the topic of thought to be at the “navel of the dream,” a place left in its tangled obscurity, or “bound to branch out endlessly,” to be drawn out by analysis (The Interpretation of Dreams 525).

9 We can note that more recently, as we will consider in the context of Thoreau, cognitive approaches have given us valuable leads into re-understanding nineteenth-century thought on the mind, nature and perception. James J. Gibson’s “ecological perception” or Alva Noe’s “enactive” skilful world-negotiation in this regard are remarkable. Yet, each still finds the place of the mind in invariant externalities – what the world “makes itself available to us” (Noe 16) in a way that Thoreau, for example, will avoid. Put
differently, claims that perception is a form of action, or even a skillful haptics, and that the world is an “external memory” are compelling, but they still cleave perceiver from perceived, subject from object, mind from world, treating the latter as an opportunity for use in every case (Noe 6)).

10 The emphasis on form here is not to be confused with an exercise in formalism, but an examination as to how these writers still lead us down valuable avenues for life-thinking: learning locality, developing a sense of place, for writing the earth and the socius. As Emerson writes in “Fate”: “To me, however, the question of the times resolved itself into a practical question of the conduct of life. How shall I live?”

11 See A.O. Lovejoy’s The Great Chain of Being for elaboration of “The Great Chain of Being,” which he equally finds a basis for in Plato’s Republic, in which Plato fundamentally separates the politics of the agora from infinite justice.

12 See De Anima and Physics, especially Book IV.

13 This attitude towards change can be seen in a number of Aristotle’s concepts, not only place but also motion, locomotion (entelechy), hylomorphism, memory (as placed in both mind and body, as place of imagination in that it brings what is absent back to the mind) and most of all in continuity.

14 See Deleuze The Fold: Leibniz and the Baroque, xvii.

15 Whereas we would be quick to mark that national categories are hardly applicable in these cases (especially since the work of many of these figures moved quickly across national boundaries, as is the case especially of Buffon).

16 See Joan Richardson, A Natural History of Pragmatism, 73.

17 On this basis alone, we could resist Cabot’s reminiscence that “The Boston or New England Transcendentalism had, as Dr. Hedge says, no very direct connection with the transcendental philosophy of Germany, the philosophy of Kant and his successors” (Cabot Emerson I. vii. 248)

18 See Dewey’s “The Development of American Pragmatism.”

19 To borrow another phrase from a book title of Ed Casey’s.

20 As Elaine Miller writes in her The Vegetative Soul: “At the conclusion of his The Metamorphosis of Plants, Goethe distinguishes between the regular, successive temporality of development from stem to leaf, and the eruptive emergence of flower and fruit. Together the two movements form a kind of natural rhythm, which Goethe calls der Rhythmus des Lebenskraft” (47).

21 See also Emerson’s JMN XI, 290, 315.

22 See Douglas Miller’s “Introduction” to Goethe’s Scientific Studies, xiv. Although Linnaeus is often his primary interlocutor, in his autobiography, Goethe goes so far as to make Spinoza his primary influence: “This mind that has so decisively affected me and has so greatly influenced my whole way of thought was Spinoza” (Goethe, Aus meinen Leben: Dicthung und Warheit (1811-33), 2ed. (Berlin und Weimar: Aufbau Verlag, 1984), 623, as cited by Richards in The Romantic Conception of Life, 36.

23 Perhaps we could say that Casey’s blind-spot, by concentrating on a European tradition and not looking into the American one, was perhaps that he was just not looking in the right place. That said, to be fair we should add that in one of Casey’s other great studies of place, Getting Back into Place, he does give substantial attention to Henry David Thoreau. Thus we are left to wonder why Thoreau is not included in Casey’s philosophical history of place, The Fate of Place. Despite the brilliance and breadth of his study, all too often he forces general claims at the expense of individual writers. In this case it is a general claim about the nineteenth-century, but this also is the case in his studies of Modern conceptions of space.
Despite its “poetic construction” Emerson’s proposal nonetheless bears specific resemblance to a variety of philosophical and natural historical projects with which it must be oriented: Fichte’s work to form the “Science of Knowledge” as a “pragmatic history of the human mind” (Fichte GGW, 222; FES, 198-199), Schelling’s enquiries into the “laws of the human mind as the laws of nature” such that he can call philosophy a “natural science of our mind” in his Ideas for a Philosophy of Nature (1797); Hegel’s Encyclopedia of the Philosophical Sciences, especially Part II, his “Philosophy of Nature,” in which he undertakes an extensive history of the concept of nature as “other” (alienation) and thus to be brought back to Geist via its logicization. Emerson follows Sampson Reed’s Growth of the Mind, which, as Barbara Packer relates, “argues against the Lockean view of the mind’s structure and suggests instead a model of mental development illustrated by the poetry of Wordsworth and other English Romantics. The mind, in this view, is not a passive receiver of stimuli, but a germ that grows and expands by assimilating things from its environment” (Packer 27).

As we will explore in Chapter 2, if Emerson was not fully acquainted with Hegel’s texts themselves, he was directly familiar with the work of Hegel’s French commentator Victor Cousin, as well as that of many of Hegel’s Anglo-American adherents, such JB Stallo’s General Principles of the Philosophy of Nature, with an Outline of Some of Its Recent Developments Among the Germans, Embracing the Philosophical Systems of Schelling and Hegel, and Oken’s System of Nature, as well as The Secret of Hegel: Being the Hegelian System in Origin Principle, Form and Matter by the Scottish Hegelian John Hutchinson Stirling. (Emerson’s endorsement of Stirling in fact appeared on the flyleaf of his book). Emerson interacted with the so-called “Ohio” and “St. Louis Hegelians,” via Moncure Conway, Denton Snider, W.T. Harris, et.al.

A philosophy of Nature is the centerpiece of Hegel’s Encyclopedia of the Philosophical Sciences, after the Encyclopedia Logic and followed by his Philosophy of Mind (Geist).

See Emerson’s “Uses of Great Men,” in which he adds to this “We are as much gainers by finding a new property in the old earth as by acquiring a new planet” (620).

A work which has strong affinities to the nineteenth-century American thinking (especially James’ radical empiricism), though works to advance the thinking of space, events and experience into the realm of twentieth-century Physics and Mathematics.

See Emerson, “Goethe or the Writer,” Essays and Poems, 746. We will investigate in greater depth below how Emerson comes to develop his flexible notion of classification, by which the earth is always overwriting – or re-mapping – itself.

Chapter 1

From Borges, Selected Poetry. Ed. Alexander Coleman. (New York: Penguin, 1999), 211. The erroneous date of Edwards’s death, unnoticed by the translator, has been corrected above.

Edwards’ “Personal Narrative,” as Wallace E. Anderson notes in his “Introduction” to Volume 6 of Edwards’ writings (Scientific and Philosophical Writings), was written in 1739. Its manuscript was subsequently lost, although it was published in Samuel Hopkins 1765 Life and Character of the Late Reverend Mr. Jonathan Edwards. It was later reprinted in Dwight’s text, which James cites.

Stephen Daniel makes this point in contrast to the work of Nicholas Malebranche: “But in contrast to Malebranche’s doctrine of ‘seeing all things in God’ (where God is still considered a subject distinct from the vision), Edwards’s doctrine of excellency assumes that God is the principle whereby the vision’s differentiations and associations occur. Any moral or aesthetic harmony that we perceive in the world is thus not accidental, for our perception of nature itself is part of its inherent, divinely established intricacy and order” (Stein 164).
We could also take issue with Edwards on this point (and thus Miller as well) on the basis of some of Edwards’ more imaginative types, for example, in no. 4 that “The heaven’s being filled with glorious, luminous bodies, is to signify the glory and happiness of the heavenly inhabitants; and amongst these, the sun signifies Christ and the moon, the church.” In 179, Edwards goes as far to cite Spenser’s *Similes and Sentences*, that “The MOLE opens not his eyes till he be dead.” See Spenser’s *Similes and Sentences* p. 69, no. 288.

Perry Miller treats this issue in depth in his introduction to “Images of Divine Things” at one point citing Pascal: “‘The type has been made according to the truth, and the truth has been recognized according to type.’ By contrast, the allegory, the simile, and the metaphor have been made according to the fancy of men, and they mean whatever the brain of the begetter is pleased they should mean. In the type there is a rigorous correspondence, which is not a chance resemblance, between the presentation and the anti-type; in the trope there is correspondence only between the thing and the association it happens to excite in the impressionable but treacherous senses of men” (Miller, *Images*, 6-7).


As Wallace Anderson writes: “The doctrine that all substance is matter was seen as a direct contradiction to these basic tenets of Christian natural theology. Hobbes’ metaphysics was taken by his critics to imply either an outright atheism, or else the radically heterodox thesis that God is material. It denied the independent reality of any intelligent and voluntary spirits, and so, by implication, the independent reality of an omniscient, omnipotent, and beneficent being. Materialism proposed that the universe is a complete, autonomous, and self-sustaining system of unthinking bodies that are subject only to inherent, necessary, and mathematically exact laws of mechanical causation; and so it ruled out the conception of a divine and providential government of the world. And it held that all phenomena whatever are reducible to or explainable by the properties and motions of bodies alone, so that even the moral sciences are to be treated as a special branch of mechanics” (*WJE* 6:54).

“Nor does it follow from hence, that spirits are nothing; for they have dimensions, and are therefore really bodies; though that name in common speech be given to such bodies only, as are visible, or palpable; that is, that have some degree of opacity: but for spirits, they call them incorporeal; which is a name of more honour, and may therefore with more piety be attributed to God himself; in whom we consider not what attribute expresseth best his nature, which is incomprehensible; but what best expresseth our desire to honor Him (Hobbes 447).

The title of Bramhall’s appendix to his *The Latest Animadversion of Hobbes*.


In his “Things to be Considered” Edwards further postulates how the body and soul interact: “All the way that the soul can influence the body, is only by emitting of animal spirits from the brain; yea, when the soul retracts animal spirits from some part, it is by emission in others. The emission is either natural (which follows merely from the presence of the soul in the brains or that which follows of itself from thoughts and passions), or voluntary. And all the way that body has influence upon the soul is by the influx of animal spirits to the brain of efflux from it (*WJE* 6:246). Thus it is the soul that is responsible for emitting animal spirits, not the body. Note also how Edwards opposes voluntary to “natural” rather than to “involuntary.”

See for example, Edwards early text “Of Insects”; see also Anderson’s introduction to Volume 6 of Edwards’ works, *WJE* 6:22.

In this entry, Anderson notes, Edwards drew on the *Compendium Physicae* of Charles Morton.

See also Perry Miller, *Jonathan Edwards*, pp. 83-85, and *The New England Mind, The 17th Century*, 207. For an example of a vehement counter-response to these apologetics, see Le Mettrie’s *Machine Man*. 224
44 Which Anderson points out, see WJE 6:23.

45 In terms of Edwards’ *Personal Narrative*, Richardson writes that “we see Edwards naturalizing the supernatural, without in any way diminishing that divine supernatural, his soul/mind informed by what he had learned from Newton, that information transfiguring the expected temporal sequence with pools of light *diffused* throughout his account” (57).


47 Edwards, however, in order to ultimately prove the hypothesis wrong, can’t help speculating what *would* happen if atoms *could* make wrong steps, leading him to a notion of an “eternal return”: “the least wrong step in the least atom, happening never so seldom, if it returns at a certain period, would most certainly, throughout eternity so returning, totally subvert the order of the universe; or if it be supposed, taking one time with another, to be equally frequent (as without doubt it will be, if there is any): and thence...there is very good philosophical reason to thing the hairs of our head are all numbered” (WJE 6:232).

48 As S.H. Lee writes in *The Philosophical Theology of Jonathan Edwards*: “a body is ‘the Deity acting in that particular manner in those parts of space where He thinks fit.’ The ‘particular manner’ of resisting or God’s acting in space is ‘established’ and ‘fixed’ by God and thus permanent. Therefore, the ‘manner’ of ‘laws of resistance’ are ‘essential to the very being of nature’. Extending this analysis to the nature of all beings, Edwards concludes: ‘It is laws that constitute all permanent being in created things, both corporeal and spiritual.’ A law of nature, as Edwards uses the term, is a dispositional force or a habit with a mode of reality apart from its exercise. Thus, when God causes resistance, God follows the law that God has fixed – that a particular sort of resisting occurs at a particular time. To put it differently, a body is essentially and abidingly a disproportion to have a particular kind of resisting caused by God to occur at a particular space and time” (251).

49 As Daniel continues: “Furthermore, this differentiation of bodies occurs in terms of *perceived* differences in resistance and thus must depend on an activity of the mind; otherwise neither individual bodies nor the whole corporeal order of the world would be *identifiable* at all. To think of a body’s existing apart from such relations would be to imagine it apart from the (mental) differentiations and associations that determine it as this or that entity; and that, Edwards suggests, is simply unintelligible. Accordingly, ‘[t]he world exists only mentally, so that the very being of the world implies its being perceived or discovered’” (167-68).

50 As we quoted above, Edwards writes in “Natural Philosophy,” “the universe is created out of nothing every moment” (6:241), a statement very close to Malebranchian “occasionalism. As S.H. Lee writes, however this “early remark” is overshadowed by his lifelong belief that God establishes the laws according to which he would cause “resistance,” and once established these laws are abided by God’s continuously immediate action of resistance. Edwards’ view, therefore, is not a simple occasionalism, according to which the world is created ex nihilo every minute” (Lee 60 “God’s Relation to the World” Princeton 60). Yet, in his “Eclaircissement XV” to *The Search after Truth*, Malebranche, as Tad Schmaltz explains, “responded to the scholastic point that occasionalism renders scientific explanation impossible by appealing to the fact that God is not an arbitrary agent, but acts in accord with His wisdom. This wisdom dictates that He act “almost always” by means of a “general and efficacious will.” Such a will produces effects that are perfectly law-like. For instance, God acts by a general will in producing changes in bodies in accord with the law of the communication of motion. Malebranche did allow that God can produce miracles by “particular volitions” that are not law-like. However, he emphasized that there are relatively few such volitions in God. Thus, we can offer scientific explanations that appeal to the laws of motion that reflect the nature of God’s general will.” As a result, one can say that it is not per se the status of natural law that distances Edwards from Malebranche, but more likely, as Stephen Daniel asserts, Edwards’ relational ontology allows him to “avoid” occasionalism. (see Daniel “Edwards as Philosopher,” in Stein 168). See also Miscell. 247, WJE, 13:360 and “Notes on Knowledge and Existence,” WJE 6:398.
For S.H. Lee, this marks Edwards’s difference from neo-Platonism: “For Edwards, unlike Neoplatonism, spiritual realities, at whatever levels of the hierarchy of being, are embodied in the material dimension of actual entities. That is the material dimension as such of particular beings embodies in a physical way the ultimate spiritual reality. Every entity in the world is somehow intended to be a spatio-temporal repetition of God’s glory at whatever level that entity may be. All levels of the hierarchy embody, and not just contain, a relation to the ultimate reality…In short, the material universe as such, for Edwards, has a God-given telos and therefore is of an ultimate and lasting significance” (Lee (1988) 249-250).

In Mather’s defense, he goes quite far (and farther than Perry Miller would allow) in outlining the analogy to the spiritual world. As Mather writes: “All intelligent compound Beings have their whole Entertainment in these three Principles, the DESIRE, the OBJECT, and the SENSATION arising from the Congruity between them; this Analogy is preserved full and clear thro the Spiritual World, yea, and thro the material also; so universal and perpetual an Analogy can arise from nothing but its Pattern and Archetype in the infinite God our Maker; and could we carry it up to the Source of it, we should find the TRINITY of Persons in the eternal GODHEAD admirably exhibited to us. In the GODHEAD we may first apprehend a Desire, an infinitely active, ardent, powerful Thought, proposing of Satisfaction” (317).

Edwards directly answers this objection, in “The Mind,” and does so in a way that shows how he conceives of God as communicating through the natural world. Edwards writes: “But you may object: But there are many things so infinitely small that their influence is altogether insensible, so that whether they are supposed or not, there will no alteration be made in the series of ideas. Answer: But though the influence is so small that we do not perceive, yet who knows how penetrating other spirits may be to perceive the minutest alterations? And whether the alterations be sensible or not at present, yet the effect of the least influence will be sensible in time (WJE 6:357).

Edwards formalizes this in his short text written towards the end of his life called “Notes on Knowledge and Existence”: “MATERIAL SUBSTANCE. Answer to that objection, that then we have no evidence of immaterial substance. Answer: True; for this is what is supposed, that all existence is perception. What we call body is nothing but a peculiar mode of perception; and what we call spirit is nothing but a composition and series of perceptions, or an universe of coexisting and successive perceptions connected by such wonderful methods and laws” (WJE 6:398).

Or, as Robert W. Jenson, writes in his essay “Christology”: “According to Edwards, we perceive what we perceive, and that is an end of the matter. This does not mean that he supposed there are only ideas of things, for the “only” again presupposes the very distinction he denies. He does not deny the reality of animal bodies, bodies of planets or trees and houses, only the picture of the world as a large container for “material substances” and for minds, as smaller containers, of “ideas.”...The objectivity of what we perceive, and of our own presence to one another, is funded not by a sovereign reality of material substances but by the reality of God. What finally exists is a universal community of “spirits”: the mind that God is, the minds he creates by communicating with them, and the intersubjectivity of created minds, the material universe, also a posit of and in the divine mind” (77). With this in mind, we can perhaps better understand Edwards’s perplexing comment that: “Genus and species indeed is a mental thing. Yet, in a sense, nature has distributed many things into species without our minds. That is, God evidently designed such particulars to be together in the mind, and in other things.... Nature has designedly made a distribution of some things; other distributions are of a mental origin” (WJE 6:355).

Pertinent here is Daniel’s comment: “By saying that the world is ‘discovered,’ Edwards does not mean that it was first ‘out there’ and then perceived. In Ramist logic, the discovery or ‘finding’ of a thing refers to its placement as a topic (topos) within intelligible discourse” (168).

Usually, contrivance implies a stratagem or makeshift towards a malevolent end, yet in Edwards’ contemporary usage, as the OED charts, it maintains a sense of an intelligent design. Henry More, in his Divine Dialogues uses the term when he asks “The Contrivance of the Earth into Hills and Springs..is not all this for the best? Later Thomas Reid, one who would continue to celebrate Edwards’ work in Scotland, Essays on the Intellectual Powers of Man (1785) details “[t]he marks of good contrivance which appear in
the works of God (VI. vi). Yet it is Locke’s celebration of the divine “Author’s” “admirable contrivances” that most likely directly struck Edwards (Locke 185).

Edwards will not retain, as will Leibniz, an Aristotelian (and scholastic) notion of “substantial forms,” wherein the animate and inanimate world have “souls” (vegetative and nutritive souls etc.).

See McClymond 6; Stein 252. As DW Bebbington notes in the article “The Reputation of Edwards abroad” (Stein 239-261), Fichte references Edwards in his System der Ethick, Bd I, s. 544-5, par 225.

Chapter 2


Nancy Craig Simmons uses the idea of a synthesis to describe the compilation by EW Emerson and JE Cabot of Emerson’s later writings, “Arranging the Sibylline Leaves,” 335-89; Cf. Robinson, 182 and 218-19n174; Bosco, “‘Poetry for World Readers’ and ‘Poetry for Bards Proper.’”

A phrase also elaborated in Kant’s third Critique, see especially the “First Introduction,” chapter III “On the System of All the Powers of the Human Mind.”

A complete genealogy of Emerson’s use and lifelong celebration of German thought is outside our scope, and has already received due critical attention. Studies that provide such a genealogy include those of René Wellek, Henry A. Pochmann, Robert D. Richardson, Jr. Gustav van Cromphout, and Stanley Cavell.

As David Robinson notes in Emerson and the Conduct of Life, 182.

As Philip R. Sloan writes in his article “Kant and British Bioscience”: “The story of Kant in England, told in the classic study by René Wellek, for this reason might better be labeled the story of Kant via Schelling in England. This was particularly true of the interpretation given to Kant by Samuel Taylor Coleridge and his London disciples. One novel feature of this assimilation of Kant by many British intellectuals is the reinterpretation of Kant’s transcendental Ideas and the regulative maxims of reason in a realistic, rather than a regulative, fashion. It was a Platonized Kant that resulted.” (Understanding Purpose: Kant and The Philosophy of Biology, 154). See also, Wellek, Immanuel Kant in England.

As Kant calls it in the first Critique, CPR Axxi.

Schelling, Ideas for a Philosophy of Nature, 43; Emerson will say in JMN X: 391, “Form is the mixture of matter & spirit, it is the visibility of spirit.” Cf. JMN, IX, 117.

Yet, as we will see, this unfolding is not exactly that of Goethe’s metamorphosis – Goethe found monstrous Hegel’s labeling of the change from leaf to bud as a “refutation” in his preface to the Phenomenology. Goethe will, for Emerson, propose different ideas of development and immanence – of encyclopedic eyes, of seeing at every pore, that resist in the name of “life” the necessity of contradiction for the movement of Hegel’s dialectic.

As he writes in his journal on May 3, 1834: “This is what Goethe sought in his Metamorphosis of Plants…We have no theory of animated Nature. When we have, it will itself be the true Classification” (JMN IV, 288-89). In a later journal entry, Emerson continues in a key passage: “All forms are fluent and as the bird alights on the bough & pauses for rest, then plunges into the air again on its way, so the thoughts
of God pause but for a moment into a form, a s if by touching the earth again in burial, to acquire new energy. A wise man is not deceived by the pause: he knows that it is momentary: he already foresees the new departure, and departure after departure, in long series. Dull people think they have traced the matter far enough if they have reached the history of one of these temporary forms, which they describe as fixed and final” (JMN IX, 301).

73 As Elaine Miller writes, “Goethe’s The Metamorphosis of Plants [thus] gives crucial content to the figure of plant growth, as it marks the important transformation in botanical paradigm – from classification to morphology” (13).

74 Friedrich Schiller to Johann Wolfgang von Goethe (23 August 1794), in Goethe Sämtliche Werke, 12:15.

75 Nature; Plotinus, The Enneads, Book 4

76 Cf. Emerson’s poem, “Woodnotes II”

77 Admittedly, it is difficult to demarcate clear shifts in Emerson’s philosophy – his practice of integrating and rewriting earlier material, his poetic reuptake of philosophical terms and concepts, his catholicity of citation, and perhaps most pointedly his writing practice as an experimental “working-through” of these concepts and sources, each betray any neat chronology or easy pigeon-holing of his thought.

78 Cf. David Robinson, Emerson and the Conduct of Life, 183-85. Edward Emerson’s note to Natural History of Intellect is telling in this regard as well in CW12.

79 Pochmann, 203.

80 As cited in Lloyd Easton’s The Ohio Hegelians: John B. Stallo, Peter Kaufmann, Moncure Conway, and August Willich, p. 46. Easton provides the following note for the passage: EW Emerson and WE Emerson, eds. Journals of Ralph Waldo Emerson (Boston, Houghton Mifflin Co., 1912, VIII, 77; MS Journal in Pochmann, op cit. p. 200. Easton’s work also includes a very useful reprinting of sections of the work of each.

81 The idea of spiral growth is to be found in Goethe, on whom Schelling, Hegel, and Oken often fundamentally relied; yet his work “The Spiral Tendency in Vegetation” was one of Goethe’s last scientific works, begun ca. 1828, after Hegel’s Philosophy of Nature had been on the whole articulated. Goethe’s manuscript remained unfinished. See Goethe’s Scientific Studies, 105-07 and 330n.1.

82 See also Hegel’s discussion of porosity in his Science of Logic.


85MS Journal, “ZO. 1856,” 154; “LN. 1866,” 19; reprinted in Journals X, 33-34 (1864). See Pochmann, pp. 202-203 and 615n.546, where he provides ample support of this assertion. Pochmann also directs the reader to Stallo, 492-3, as well as 500-1, 509-10, 515, 519-20.

86 As Van Leer and Cavell each note, one should take into account the Hegelian overtone of Emerson’s use of the word “annul.” This is intensified elsewhere in “Fate,” “Every solid in the universe is ready to become fluid on the approach of the mind, and the power to flux it is the measure of the mind” (CW 6: 23).

87 Stallo will later renounce his earlier philosophical idealism as an “ontological reverie,” and seek to distance himself from Hegel. His later philosophical work, after a period of diverse successes as a judge and diplomat, was oriented more towards a scientific positivism. Case in point is his Concepts and Theories.
of Modern Physics, a major work in the history of science and influential on Ernst Mach (a correspondent of Stallo’s) as well as Einstein, who cited it as one of the major influences of his theory of relativity.

88 See Cavell’s reading of “Experience” in response to Kant. Often it has been said that “Experience” marks the high water mark of Emerson’s philosophical influence, but this is contended here. See the final chapter of David van Leer’s Emerson’s Epistemology.

89 Wherein Emerson flatly concludes in a journal version of this passage: “If they had made the transit, common fame would have found out. So I abide by my rule of not reading the book, until I hear of it thro’ the newspapers.”

90 Given that the manuscripts for the 1870-71 University Lectures at Harvard no longer survive, this investigation will follow the text of Natural History of the Intellect as compiled by James Elliot Cabot and Edward Emerson printed in Volume XII of Emerson’s Collected Works. The text is comprised of three sections, “Powers and Laws of Thought” (the title of which was added by Edward in 1903-04), “Instinct and Inspiration” (added by Edward in 1903-04 from manuscript sources) and “Memory” (previously a stand-alone essay, also added by Edward in 1903-04). See also notes 2 and 3 above.

91 Such a project has a rich history in post-Enlightenment thought: we find Le Mettrie proposing a “Natural History of the Soul,” which had a similarly philosophical posture as Emerson’s project intends – to understand the ‘inextricable interlinking’ of vital force, matter, spirit, life and movement with human intelligence. The template for a project “Natural History of…” bears many imprints. Quiet references to Le Mettrie persist throughout Natural History of Intellect, especially passages in reference to the vegetative intellect. See ‘Man as Plant’ (Emerson: “Man seems a higher plant”) and Machine Man. In short, whether Emerson is directly referencing Le Mettrie or not, they each share the interest in articulating the conjointure of the soul/intellect with the materiality of the brain and soul. There was Chambers’ Vestiges of the Natural History of Creation; Georges Cuvier and his pupil and successor, Achille Valenciennes’ monumental Histoire Naturelle des Poissons; and, of course, Buffon’s seminal Histoire Naturelle. Likewise St. Beuve, who Emerson frequently cites in his journals, works to develop a “natural history of intellectuals” which Proust writes on (referencing Taine as well). (See “The Method of Sainte-Beuve” in Proust’s critical book, Contre Sainte-Beuve). Emerson’s characterization of the project as a “memoires pour servir” also has several resonances: French historian François Pierre Guillaume Guizot’s “ Mémoires pour servir à l’histoire de mon temps: Tome 4, an extended inquiry into the “poliète exterieure” of France from 1832-36). Interestingly, Guizot’s student, Emerson’s friend Alfred Brisbane, had also studied with Victor Cousin and later with Hegel in Berlin (Richardson 365). Yet Brisbane, far from an adherent to Hegel (as Richardson reports, Brisbane decries him: “I found in Hegel and among his disciples no idea of a higher social order than the European Civilization”), instead counterposes to Hegel’s Eurocentrism an expanded notion of Human utopian organization, action and attraction influenced by Fourier. There are several other resonances as well: Memoires pour servir a la vie de M.de Voltaire. Ecrits par lui-meme. (1784.); Claude Perault and D. Dodart’s Memoire pour servir à l’histoire naturel du Lion, de la Lionne , du Caméléon, de l’Ours, de la Gazelle, du Chat-pard, du Renard marin, du Loup-cervier, de la Loutre, de la Civette, de l’Elan, du Veau marin & du Chamois ... avec douze figures gravées d’après Séb. Leclerc, par de bons artistes. (Paris: Imprimerie du Louvre, 1700), and Mémoires pour servir à l’Histoire Naturelle des Animaux et des Plantes. Par Messieurs de l’Academie Royale des Sciences. (Amsterdam: Pierre Mortier, 1736); Smeathman, H. Mémoire pour servir à l’histoire de quelques insectes, connus sous les noms de Termés, ou fourmis blanches. (Ouvrage rédigé en Francois par M. C. Rigaud. Paris: Née de la Rochelle, 1786); Tulasne, L.R. Mémoire pour servir à l’histoire organographique et physiologique des Lichens. (Paris, Victor Masson, 1852); Also of interest are Charles Bonnet’s La Palingénésie Philosophique, ou Idées sur l’état passé et sur l’état futur des Étres Vivants. Ouvrage destiné à servir de Supplement aux derniers écrits de l’auteur ... Genève, C. Philibert & B. Chirol, 1770); Georges Cuvier and his pupil and successor, Achille Valenciennes’ monumental Histoire Naturelle des Poissons; and, of course, Buffon’s seminal Histoire Naturelle.

92 It is noteworthy concerning the last of these, that the material under the heading “Instinct and Inspiration” placed by Edward follows after Emerson’s initial discussion of them.
As with his claim that for Kant "there is no intellectual intuition," Cavell is misleading not because he is wrong, but in that he tells only half the story. For Kant, cognition is twofold: to be sure, sense (intuition) is receptive (and not “intellectual”), and understanding is active and the spontaneous. Kant goes to great pains to show each in its distinctness in the transcendental aesthetic and transcendental logic, respectively. Yet to have a thought *strictu sensu* entails that sensibility be inseparable from understanding. Kant’s clearest formula for this occurs in the first Critique: “Thoughts without content are empty, intuitions without concepts are blind” (*Gedanke ohne Inhalt sind leer, Anschauungen ohne Begriffe sind blind*) (CPR A52/B76). That thinking is both active and passive, the sensory manifold is intuited and synthesized thus allows Kant to open a “pathway” for his critical philosophy between the empiricism of Hume and Locke and dogmatic rationalism of Leibniz and Christian Wolff. This is further complicated if we call into question whether perception is indeed purely receptive in Kant – in other words that perception (and thus intuitions) are merely sensory “input.” In the case of Emerson, there are indeed many instances where he speaks of the intellect as receptive and intuition as active. Yet to leave it at that, as Cavell does, neglects the fullness of Emerson’s epistemology.

Emerson’s second section, “Instinct and Inspiration,”(added to the text from manuscript sources by Edward in 1903-04) builds on these preceding definitions, often repeats verbatim or with slight variation lines from the preceding section (and thus here we can again gauge editorial intervention). He does, nonetheless, expand his thoughts on inspiration as excited instinct.

Bosco, “His Lectures Were Poetry, His Teaching the Music of the Spheres,” 7-26. 


Such a fluid, evolving relationship between observational and categorical knowledge will likewise be at the center of Thoreau’s thinking of perception. However, as commentators such as Francois Specq have argued, Thoreau’s program (most elaborately realized in his *Journal*) will be oriented towards the particularity of observed knowledge in the moment of its encounter, rather than to persistently seeking the analogical “sliding door” to the ideal that Emerson continues to do throughout his later thought.


Richardson 449; see also Emerson, from “Manchester Lectures, 1847, Fragments,” Houghton b Ms Am 1280, 199).

**Chapter 3**

Citations from Thoreau’s *Journal* will follow the general practice of citing the volume number, page and date for the Princeton editions released to date, a Roman numeral for the volume number followed by a page number and date for the 1906 edition, and finally a Manuscript Volume Number followed by page number and date for the forthcoming Princeton editions available online. See bibliography for further details.

Kant would claim in his first Critique that all nature when encountered empirically was a *quantum discretum*. As Zammito writes, “In that context he addressed himself directly to ‘the widely discussed law of the continuous gradation of created beings, which was propounded by Leibniz, and admirably supported by Bonnert.’ Kant argued that the maxim of continuity could not be taken as an objective principle of human nature: ‘For observation and insight into the constitution of nature could never justify us in the object assertion of the law. The steps of the ladder, as they are presented to us in experience, stand much too far apart; and what may seem to us small differences are usually in nature itself such wide gaps, that from any such observations we can come to no decision in regard to nature’s ultimate design – especially if we bear
in mind that in so great a multiplicity of things there can never be much difficulty in finding similarities and approximations” (Kant CPR A668/B696; Zammito 202, c.f. n58).

102 As Kant further states: “It is true that the understanding is a priori in possession of universal laws of nature, without which nature could not be the object of experience at all. Yet there is required in addition that nature also have a certain order in its particular rules – rules that the understanding can come to know only empirically and that, as far as it is concerned, are contingent. [But since] without these rules there would be no way for us to proceed from the universal analogy of a possible experience as such to the particular one, the understanding must think of these rules as laws (i.e., necessary) – even though it does not cognize, nor could ever see, their necessity – for otherwise such laws would not form an order of nature. Hence, though the understanding cannot determine anything a priori with regard to these (objects) [objects of experience insofar as their form is particular rather than universal], still it must, in order to investigate these empirical so called laws, lay an a priori principle at the basis of all (Kant CJ 185).

103 Kant, often wrongly accused of not allowing for empirical knowledge – for “locating the paradigms of aesthetic form in the human mind and dislocating them from the world” (Peck 66).

104 The immediate context of this quotation is: “what may seem to us small differences [between them] are usually in nature itself such wide gaps, that from any [empirical] (such) observations we can come to no decision in regard to nature’s ultimate design – especially if we bear in mind that in so great a multiplicity of things there can never be much difficulty in finding similarities and approximations” (CPR A668/B696).

105 I have in mind here specifically the portion of Kant’s third Critique concerning “Teleological Judgments” which includes the notion of purposiveness (Zweckmaessigkeit).

106 As in Metaphysical Foundations of Natural Science and elsewhere.

107 Thus again we can disagree with Cabot’s statement in his biography of Emerson that “The Boston or New England Transcendentalism had, as Dr. Hedge says, no very direct connection with the transcendental philosophy of Germany, the philosophy of Kant and his successors” (Cabot, Emerson I. vii. 248). See for example Cavell, Senses of Walden, 94-95.

108 In this context, I could add in passing that claims concerning Emerson or Thoreau’s Pragmatism, might benefit from a in-depth “return to Kant” in order to work out the conceptual lineage in which those like James and Peirce both take up and reject Kant and late 19th Century neo-Kantianism.108 I will have to leave this, on the whole, as a provocation.

109 And in many ways transgressed the boundaries Kant had set for both science and critical philosophy.

110 As Laura Dassow Walls has recently characterized it in her lecture “Walking West, Gazing East” delivered at the conference, “Thoreauvian Modernities,” ENS, Lyon, France, May 14, 2009.

111 In Heidegger’s poetico-philosophical terminology of his Beitraege, it is the Verhaltenheit (as “reservedness” or “holding-back” - the approach to, rather than the recovery of the object.

112 As Thoreau writes: “We can never safely exceed the actual facts in our narratives. Of pure invention, such as some suppose, there is no instance. To write a pure work of fiction even, is only to take leisure and liberty to describe some things more exactly as they are. A true account of the actual is the rarest poetry, for common sense always takes a hasty and superficial view” (265-266). In this formulation, even narrative fiction cannot go beyond the actual facts, such that to “write a pure work of fiction” becomes to draw on the power of the imagination to “describe things more exactly as they are.”

113 Thoreau’s program, then, is not that the empiricism of Locke or Hume, nor does it prefigure the positivism of Comte nor the induction of Mill that will arise in the second part of the nineteenth-century. It
is instead marked by the Kantian revolution in philosophy, which Goethe becomes deeply affected by especially after his reading of the Critique of Judgment with Schiller’s help.

114 The differences between Kant and Goethe concerning the particular and whole are complex and outside the scope of this study. Nonetheless, as Robert J. Richards neatly summarizes, “though Goethe did not use the same language, these differences marked for Kant the distinction between a mechanical system and an organic system. In Kant’s terms, the parts determined the whole in mechanical systems, whereas the whole determined the parts in organic systems” (Richards 451-2).

115 Again we can cite the passages from Goethe (as in Chapter 2 above on Emerson) to show his interest in both the empirical and the ideal: from “Significant Help Given by an Ingenious Turn of Phrase”: “my thinking is not separate from objects…the elements of the object, the perceptions of the object, flow into my thinking and are fully permeated by it…my perception itself is a thinking, and my thinking a perception” (Goethe 39). As Goethe will detail in his short piece on Kant, “Judgment through Intuitive Perception,” the work of perception is to “penetrate the divine forces of nature” via an intuitive, imaginative movement from the empirical phenomenon to the archetypal (31-32). Jennifer Baker has made this point in her review of Eric Wilson’s book: “For Emerson and Thoreau, the crystal represented the fusion of eternal and temporal inherent in all natural objects. Intricately structured and also susceptible to thawing, the crystal partakes of a transcendent law and yet remains perishable matter. For this reason, the crystal is the symbol of symbol itself: a concrete reality that momentarily reveals something universal. Moreover, crystal gazing combines empiricism and idealism, accurate description of unique concreteness and the exercise of creative imagination. Crystal gazing, Thoreau wrote, exemplifies all good nature observation, as it aspires by way of intuition “to break through the images to the archetypal form” (44).

116 According to Richardson, Thoreau reads Bartram, Cuvier, Aggasiz, and Darwin’s Journal of Researches 1851, and throughout 1851-1852 devotes systematic attention to Linnaeus (Richardson 246, 254-6).

117 In full the quote is: “Think of the consummate folly of attempting to go away from here! When the constant endeavor should be to get nearer and nearer here.” (11: 273-75)

118 This chapter is thus indebted to, and hopefully builds on, the work of not only Cameron, but Peck, Walls, Robinson, Specq, Dean, Kristin Case and many others. The somewhat recent publications of Dean’s editions of Thoreau’s Faith in a Seed and Wild Fruits have opened up a rich area of research on later Thoreau, as have the forthcoming Princeton editions of the later Journals which currently available in manuscript form.

119 Peck comes to his notion of “category” in Thoreau through a contrast with Kant’s understanding of the relationship between the particular and general. As Peck writes: “So intimate is the Journal’s reciprocity of relation and category, observation and generalization, that it is impossible to say which comes first in any given instance of perception recorded there. This intimacy makes Thoreau’s category something very different from Kant’s, which exists a priori to our perception of the mobile, diverse, living world. Thoreau’s categories, unlike Kant’s, are of the world – they emerge from it, even as they engender fresh new explorations of the world, which in turn lead to the creation of still further categories. Categorization in Thoreau is an earth-bound, perceptually grounded process …But in Thoreau’s world, unlike Kant’s, the category and the world are always sliding back and forth in relation to one another, like a refracting telescope pointing in opposite directions at the same time, constantly shaping and refocusing each other. This is part of what Transcendental “correspondence” meant for Thoreau, as he adapted this term from Emerson for his own distinctive purposes” (85). Peck’s notion of a flexible category compellingly details the relation of the particular and general (vis-à-vis perception) in the Journal. Yet Peck’s use of the term “category” is itself misleading insofar as it relies on taking the term out of its specific Kantian context. In other words, “category” as Peck is using it here and as it functions as a concept in Kant denote two different things, so any contrast between Kant and Thoreau in terms of “category” are a false contrast. Further, as we strained to show above, Kant’s project, rather than dislocating the mind from the world from, is oriented towards protecting empirical phenomena from hasty generalization. Kant’s transcendental idealism is not the Berkeleian idealism which the first Critique works to refute. Kant’s categories, though
they may be arbitrary vis-à-vis their deduction, are nonetheless in place in Kant’s system to protect empirical phenomena, in fact they become how Kant organizes his *Metaphysics of Natural Science*, a work devoted to the physical sciences. In this sense, Kant’s categories, in Peck’s terms are the “telescope” itself, the perceptual instrument that makes possible all perception in the first place. Although Kant’s conceptual architectonic bifurcates and separates terms in order to isolate them in their conceptual clarity, the twofoldness of cognition is strict throughout to the maxim: “Thoughts without content are empty, intuitions with concepts are blind” (As Kant continues, “It is thus necessary to make the mind’s concepts sensible (i.e., to add an object to them in intuition) as it is to make its intuitions understandable)” (A52/B75). The a priori structure is not temporally before perception for Kant (for whom the manifold of sensation is a posteriori) but makes perception possible as its condition of possibility. In *Senses of Walden*, Cavell makes a similar claim as Peck concerning the experimental character of the a priori (in a passage cited in part above). Cavell thus likewise conflates Kantian terms to describe Thoreau’s relationship towards the object-world.

120 As Walls writes: [“Thoreau] ranged ever more deeply across the Concord landscape, ever encountering more ‘facts’ which he recorded daily in faith that their amassing would reveal a pattern at last. This recursive project opened before him the study of an enormously complex system, the village and environs of Concord, and the flow if its infinitely various nonrepeating but patterned phenomena gave him a crucial insight: that the chaos of wild nature was not meaningless or a void, but information which he could process into meaning (Walls 227).

121 Humboldt’s empirical holism according to Walls, contrasts the “rational holism” of “the Anglo-American tradition of natural theology, as well as Goethe and the German Naturphilosophen, Coleridge and British transcendental morphology, and finally Emerson and Agassiz” which “conceived the mechanico-organic whole as a divine or transcendent unity fully comprehended only through thought” (4-5).

122 Cavell, *Senses of Walden*, 95. See note 23 above.

123 Walls on this basis celebrates Thoreau’s contemporary pertinence: “By acting as a Humboldtian naturalist, Thoreau participated in and helped to advance an alternative tradition of romantic sciences and literature that looked forward toward ecological approaches to nature and that was suppressed, then forgotten, by later organicist interpretations” ((Walls 4-5). Or later, as Walls writes: “In nineteenth-century terms, Thoreau rejected neither poetry nor science, nor did he simply ‘reconcile’ them, collapsing them together. In the ‘consilience’ of Emersonian transcendental wholes with Humboldtian empirical science, he sacrificed neither but attempted to create a way of knowing which combined them both into something new” (Walls 11)).

124 More recently, Walls has characterized this connectivity in terms of a “transjectivity” between the human subject and the object-world. By delimiting the structure of the *Journal* as “recursive” and the subject-object relation as “transjective,” Walls indicates that importance of the relationality of the particular phenomenon to all other particulars.

125 Or following Bruno Latour, the collectivity “natures” – the pluralization of nature that resists its being deployed as a unified concept by this or that group.

126 As Kant also warned in his third *Critique* that Earlier, in his first Critique “what may seem to us small differences are usually in nature itself such wide gaps, that from any such observations we can come to no decision in regard to nature’s ultimate design – especially if we bear in mind that in so great a multiplicity of things there can never be much difficulty in finding similarities and approximations.” (Kant CPR A668/B696 Zammito 202, see n58). The “great multiplicity of things” allows us to see connection everywhere, or nature can be “infinitely diverse and [thus] beyond our ability to grasp (CJ 185; 25).

127 The immediate context for this quotation is significant: “We are independent on all that we see-- The hangman whom I have seen cannot hang me. The earth which I have seen cannot bury me—Such
doubleness & distance does sight prove. Only the rich and such as are troubled with ennui are implicated in
the maze of phenomena. You cannot see anything until you are clear of it.” See following note as well.

128 Daniel Peck, in commenting on this passage, cross-lists it to the passages dealing with the “doubleness”
of thinking (as conscious self-reflection or criticism) in Walden, suggesting “That some kind of distance
was necessary in one’s transaction with the world is something that Thoreau knew well, and, as the
following Journal passage suggests, he also knew that the habitual failure to achieve this distance could
result in disorientation and malaise….Categories for Thoreau, then, are a way of seeing, of gaining the
“doubleness and distance” he celebrates in the same Journal passage and also describes in the chapter of
Walden called “Solitude” (134-5). (Peck 85).

129 As Robert Markley has called “climatological time,” Thoreau’s work is to “continually negotiate the
 vexed relationship between seemingly individual, embodied experience and scientific knowledge.” See
Markley’s “Monsoon Cultures: Climate and Acculturation in Alexander Hamilton’s A New Account of the

130 See also Richard Lebeaux, Thoreau’s Seasons, (Boston: UMass Press, 1984), p. 217. Thoreau will
reiterate such sentiments throughout his later Journal, especially in passages that detail the effects of
colonization and commercialization on autochthonous species, as in the case of the extinction of wild
apples or the fur trade of which he is often biting critical.

131 As the editor in the manuscript notes, “Earlier editions of the Journal had ‘eloquent’ for ‘elegant’ here.”

132 In his later essay, “Poetry and Imagination,” Emerson will likewise develop his own notion of the
“poetic perception of metemorphosis” which for him becomes the key to understanding the natural order of
the world, and the place of the mind as immersed in it. As Thoreau might have also said, Emerson writes
“science was false by being unpoetical.” Thus we need to acknowledge, as does Walls, the mark of
Humboldtian empiricism on Thoreau’s work recombined with an earlier Emersonian idealism. At the same
time it must be said that Emerson’s idealism underwent key shifts towards the physical force and becoming
of materiality in the construction of his Natural History of Intellect and other works.

133 It is interesting that in the passage Thoreau relates this in terms of a passport: namely, that the scientific
description “is like the measure they take—or the Des. they write of a man when he leaves his country{in
his passport}—& insert in his passport—for the use of the detective police of other countries— The men of
science merely look at the object with sinister eye to see if corresponds with the passport—& merely visé or
make some trifling additional mark on its passport & let it go—but the real acquaintances & friends which it
may have in foreign parts do not ask to see nor think of its passeporte[sic]” (MV32:162-163; 10/13/60)

134 Cf. Walls 127.

135 See Specq, 51.

136 It is worthwhile in this context to note (as a point of comparison) that for William James it is the process
of perception distinguishes a perception from a sensation. As James writes in his Principles of Psychology:
“Any quality of a thing which affects our sense-organs does also more than that: it arouses processes in the
hemispheres which are due to the organization of that organ by past experiences and the result of which in
consciousness are commonly described as ideas which the sensation suggests” (76). This leads James to
postulate the content of perceptions as a combination of “sensational” and “reproductive brain-processes”:
“Every concrete particular material thing is a conflux of sensible qualities, with which we have become
acquainted at various times” (78). Perception for James becomes the process by which the mind integrates
the various “actual” or “revived” sensations (the “conflux”) in the instance of cognizing a particular object
or spatial configuration. Whereas Thoreau’s notion of perception is not as explicitly philosophical or
psychologically nuanced as James’s, we can easily see how Thoreau, throughout the Journal, highlights
how processes of perception integrate actual and revivified sensations. The Journal’s calendric, its precise
notations of nature’s seasonal and yearly variations, and its deep devotion to the structure and recurrence of
phenomena, persistently foreground how perceptions revive old perceptions: sensations reoccur as they are 
revived and integrated through new perceptual acts. A furrowed pit, every perception awaits its further 
dispersions. At times it becomes pushed against the stone-ground where it will not bloom, others it takes 
hold in the warm inviting loam where fact can flower. Perceptions, like seeds are persistently deferred. 
Perceptions become processes of dispersion, perceptions become processes, perceptions become. In 
another sense, Thoreau’s process of writing could be said to be a constantly return to the perceptual instant.

One could also look to Victor Carl Friesen’s *The Spirit of the Huckleberry: Sensuousness in Henry 

In Thoreauvian terms, Debussy would offer us new *Claires des ‘loon’*.

In the *Journal*, this passage occurs on August 30, 1856, yet Dean’s text *Wild Fruits* insinuates it is on 
October 17, 1859.

“Gibson rejected the claim that the retinal image is the starting point for visual processing. He argued 
that the whole array of light rays reaching an observer, after structuring by surfaces and objects in the 
world, provides direct information about the layout of those surfaces and objects, and about movement 
within the world and by the observer” (Green and Georgeson 303).

As Gibson states, “The error lies...in assuming that either innate ideas or acquired ideas must be applied 
to bare sensory inputs for perceiving to occur. The fallacy is to assume that because inputs convey no 
knowledge they can somehow be made to yield knowledge by ‘processing’ them.”

Receptors are *stimulated* whereas an organ is *activated*...the eye is part of a dual organ, one of a pair of 
eyes, and they are set in a head that can turn, attached to a body that can move from place to place. These 
organs have a hierarchy and constitute what I have called a *perceptual system*. (Gibson 1979, 53; Bruce and 
Georgeson 307).

See Cavell, “Night and Day: Heidegger and Thoreau,” for an account of this duality.

As Thoreau writes in his *Journal* on November 3, 1858. “I associate the idea of friendship methinks 
with the person the most foreign to me – …we are attracted toward a particular person but no one has 
discovered the laws of this attraction. When I come nearest to that other actually I am wont to be surprised 
at any selection——” (MV27, p. 305 J14f1).

*Ex oriente lux* becomes not only a turn to the east, but the trope of a morning light which passes through 
a forest, perpetually disorienting us.


The exact date of this entry is uncertain. Hegel, in his *Philosophy of Nature* will say concerning instinct 
in a passage that comments on Aristotle and Kant’s idea that organisms are an end in themselves 
(*Selbstzweck*) or purposive activity, that “Instinct is purposive activity acting unconsciously” (Hegel 389). 
Thoreau says, as if in reply, and again in the context of the European cranberry, that: “Both conscious and 
an unconscious life are good; neither is good exclusively, for both have the same source.” (Wild Fruits166)

This is a corollary to the process of “obliterating the self” she finds enacted throughout the *Journal*: “I 
mean to stress the fact that in Thoreau’s *Journal* the central Romantic question – “What is man’s relation 
to the nature that he sees?” – undergoes drastic revision. One of the disconcerting features of the *Journal* is 
how thoroughly it dismisses not just Thoreau’s consideration of himself but his consideration of other 
selves. What remains is just enough of the human to represent the natural: an isolated man recording his 
impressions of nature” (11).
Or, as Thoreau writes in *Walden*: “If the day and the night are such that you greet them with joy, and life emits a fragrance like flowers and sweet-scented herbs, is more elastic, more starry, more immortal, - that is your success” (*Walden* 495).

Chapter 4


Although the history of the idea of the transmutation of species which Darwin inherited and fundamentally modified is too long and detailed, we should note a few important points in order to better understand Dewey’s estimation of Darwin’s importance, and thus the context of both Darwin and Melville’s writing of the Galapagos. Enlightenment science and religion had worked together to conceptualize God’s immanent creative power. The microscope, for example, merely made it easier to see God working through nature’s leasts; the telescope, after the Church’s initial resistance, came to provide even more evidence of God’s immense grandeur. In this natural theological worldview, all of nature could be placed on a predetermined grid according to God’s plan, each species had its place pre-fixed in the cosmic order – on the *scala natura* or in the Great Chain of Being – a place inevitably below humanity, itself below God. Yet as the eighteenth-century wore on, new discoveries of fossils, especially those of extinct species, opened gaps in the Chain. If all the species that were created exist and could be placed in this hierarchy, how could species that had passed away then be explained? Likewise, a new sense of “deep time” emerged as geologists, including Charles Lyell, a primary influence on Darwin, used the fossil record and the stratifications of the earth to challenge the Biblically calculated age of the world. The microscope revealed an ever-richer palette of microorganisms, plant germs, and embryos developing, growing and unfolding. Anatomists paid new attention to internal “organization,” how the organs function by themselves and in conjunction with the whole organism. Processes of development began to be understood as constitutive of natural phenomena, not just external to them, and natural history at the same time became the study of the organism’s biogeography. In philosophy, Kant rigorously defined the limits of human knowledge, “justifying” the role of science only as within these limits. For Kant, the sciences should be understood on their own terms; natural science should no longer be a function of natural theology. In Heinrich Heine’s famous phrase, “Robespierre beheaded a king, but Kant sent the Almighty to the scaffold.” Yet, despite the work of these scientists and philosophers, the idea of intelligent design that natural theology insisted on was slow to die. The intellectual atmosphere of antebellum America was marked by passionate attempts to marry science to religion. Scientists like the Swiss-born naturalist Louis Agassiz who came to Harvard in the 1840s persisted in the search for evidence that God had created species as immutable and in place, asserting that species were “a thought of God” and glaciers served as “God’s great plough.” Others worked to ally gains in science with new methods of biblical criticism to further investigate God’s plan of creation through Scripture. It is in this context that we can understand Darwin.

As Melville says in *Moby-Dick*: “It will be seen that this mere painstaking burrower and grub-worm of a poor devil of a Sub-Sub appears to have gone through the long Vaticans and street-stalls of the earth, picking up whatever random allusions to whales he could anyways find in any book whatsoever, sacred or profane. Therefore you must not, in every case at least, take the higgledy-piggledy whale statements, however authentic, in these extracts, for veritable gospel cetology” (*Moby-Dick* 8). Note the pun on “burrower” and “borrower.”

As Freud would later show, Darwin delivers the “second great blow to man’s sense of domination (after the astronomy of Copernicus and before Freud’s own psychoanalysis): the emergence of the evolutionary theory that “put an end to this presumption on the part of man” by showing that “man is not a being different from the animals or superior to them; he is himself of animal descent, being more closely related to some species and more distantly to others.”
Darwin’s visit to the Galapagos was part of his famous Voyage of the Beagle, lasting from 1831-1836. The main goal of the expedition was actually to survey the extensive South American coastline for the British government. A series of South American revolutions had just concluded, and the British hoped to open new ports and thus new markets for their merchants. The slow progress of the Beagle as it surveyed the coast afforded Darwin ample time on shore to search out, collect and catalogue new species, as well as to inspect South American geology – which few Europeans had so far done. The fact that it was a British government mission, although Darwin was only a guest on the expedition, allowed him to send back these specimens to eager scientists in Cambridge and London through the British Navy. This political situation of South America is more than just an historical footnote to Darwin’s journey. It forms its explicit context, and often content of his narrative – he meets the Argentinean dictator Juan Manuel de Rosas in the midst of a genocidal campaign to gain domination over the young nation and tours the pampas looking for variants in the South American ostrich with the aid of the gauchos; he visits a slave plantation in Brazil, he stays among Cornish expatriate miners in Chile, Spanish political exiles in the Galapagos, the natives of Tierra del Fuego and later Tahiti.

Again through the British Navy mail system, Darwin received the second volume of Lyell’s Principles hot off the presses, while in South America, in which Lyell extended his geological work into a critique of Lamarck. This move from inorganic to organic speculations that would be very important for Darwin, even if he would take a different polemical stance against Lamarck.

Namely his Geological Observations on the Volcanic Islands (1844), the second edition of his Journal of Researches (1845), the Geological Observations on South America (1846), the four volumes on fossil and living barnacles (1851, 54, 55), and the Geological Observations on Coral Reefs (1851).

Jonathan Beecher, in “Variations on a Dystopian Theme: Melville’s ‘Encantadas’” speaks to this difficulty, and in so doing brings together several, diverse critical attitudes on “The Encantadas.” Beecher writes: “Critics disagree about the structure of the work, the credibility of the narrator, the function of the epigraphs, the importance of Melville’s borrowings, and the question of what binds the whole together. Even the genre of ‘The Encantadas’ is not entirely clear. On the most basic level it is a collection of travel sketches of a sort popular in mid-nineteenth-century journalism. But the sketches clearly have an allegorical dimension. They are not merely about a place but also about a condition of existence. Exactly what the allegory points to, however, is not so clear. One of the most cogent commentaries on ‘The Encantadas’ describes it as picturing a “fallen world” similar to Dante's Inferno (Newbery). Another reader finds in it "a token of the inscrutable wholeness of nature" (Seelye). For a third "The Encantadas" is a reminder of the many-sidedness of truth (Yarina 147). Others have found in it an argument with Darwin (Franklin) and an indictment of slavery (Karcher 109). So varied are the interpretations that one is tempted to regard "The Encantadas" as a palimpsest as inscrutable to its readers as was Ahab’s doubloon to the crew of the Pequod (1)." Here Beecher is right to assert that the sketches have an “allegorical dimension,” but perhaps it’s not so unreadable if understood as a mock-Darwinian approach to the different species of humans found on the islands.

Nov. 12, 1856 (Leyda 2:529). Cf. Specq 149.

From the Greek sporad or sporadēn, both meaning “scattered.”

See Deleuze’s “Literature and Life” from Essays Critical and Clinical (1-6) for an in-depth study of writing not as an imposition of form but as becoming.

This way of thinking about experience problematizes what has long been a commonality in Melville scholarship – that Melville inserts his life into his writing, and that there is thus a logical correspondence between the two that sensitive literary scholarship could uncover. This however only perpetually generates literary gossip. It reads into Melville’s description of the sterility of the Greek islands a poetic self-diagnosis of his own failure as a writer during the late period of his career. This method of reading Melville imposes a relentless linearity, as if the chronology of his texts should succumb to some narrative order. To think of his oeuvre as an archipelago allows for new continuities to emerge across his work; it
resists the usual genre distinctions that have divided it. This encourages new conversations among his texts – the formation of new sets of texts, or in Édouard Glissant’s terms, new “poetics of relation.” Here Melville could be said to be aligned with Proust’s vehement dismissal of St. Beuve’s notion that we should look to a writer’s biography for insight into his or her writing.

162 Like symbol, allegory traditionally was used as a means to access the metaphysical, as it seemed, as Gadamer shows in *Truth and Method*, “possible to know the divine in no other way than by starting from the world of senses” (73). Yet, as Gadamer asserts, the need to interpret Scripture allegorically (that is, to forge “meaningful” links between the sensible and the non-sensible), served to separate it from symbol, which could only show the coincidence of the two realms (74). For any allegorical meaning of Biblical texts to be valid, however, they had to be in line with the dogmatic assumptions of the Magisterium. This thus limited the number of possible meanings allegory could have, whereas symbol could have a conceivably inexhaustible number of “coincidences.” As art, then, became more secular – as it “freed itself from all dogmatic bends” and came to be defined as the “unconscious production” of genius – allegory “inevitably became aesthetically suspect” (78). Symbol was thus valorized in romantic and neo-romantic thought at the expense of allegory, because in symbol there seemed the possibility of identifying the self with the non-self, as it seemed to posit an “ideal, organic relation” between Nature and subject. (Paul de Man, as cited in Frank Lentricchia, *After the New Criticism*, (Chicago, 1980), 292-3.

163 This resists the common interpretation that *Moby-Dick* is an “allegory” of good and evil, an interpretation that has limited much of its criticism, especially in its earlier incarnations.

164 Paul de Man, however, famously commits himself to reversing this valorization, to which in many ways Benjamin’s early work still clings. As Berthold Hoeckner has shown, “[c]learly, the *éménence grise* behind de Man’s essay was Benjamin, who had claimed, in *The Origin of German Tragic Drama*, that time was the decisive category romantic thinkers had brought to the distinction between symbol and allegory” (8). But de Man works to show that it is symbol which is in fact “regressive,” and that allegory, “by renouncing ‘the nostalgia and the desire to coincide,’ keeps ‘the self from an illusory identification with the non-self, which is now fully, though painfully, recognized as a non-self” (Lentricchia 293). Allegory insists on the arbitrariness of signs, and is thus more “authentic” because it postulates the difference between the self and the non-self, and mimetically renders this distance. Both de Man and Benjamin see in allegory the potential to reveal gaps between meaning and intuition, signifier and signified, and subject and object. As Gyorgy Lukacs asserts in *The Ideology of Modernism*, allegory is for Benjamin “that genre which lends itself par excellence to a description of man’s alienation from objective reality”; indeed, as Benjamin himself shows, it is “the form on which man’s subjection to nature is most obvious” (Newman 232). Yet for de Man there is another, more fundamental distance that allegory unveils, that is, temporal distance. In the realm of allegory, “time is the originary constitutive category” – the allegorical sign always refers us to a previous sign which is intrinsically a “pure anteriority” (Lentricchia 295). Thus in de Man’s conception of allegory, understanding emerges as a temporal process in which the present is vitiated by a constant deferral of meaning. Allegory is the very “rhetoric of temporality” – it demands the repetition of previous signs that are, nonetheless, “never the same,” and thwarts any promise of “fully achieved understanding.”

165 Archipelago, the “master of the ocean” or literally “chief sea,” comes from the Greek αρχιπέλαγος (c.f the Italian Arcipelago), archi (leader) and pelagos (sea). It became applied to islands of the Aegean especially as governmental authorities such as the Delian league, or later the Venetian Dukes of Arcipelo (who ruled from Naxos from1210-1566) “bound” the islands under one sovereign body.

166 There is a fruitful connection to be worked out between Cameron, Olson and Deleuze – which also would open a larger investigation of Deleuze’s insistence that American literature is “superior” due to its performances of (non-Euclidean) intensities of speed, space, and process. The connection between Deleuze, Olson, and Cameron has important implications for registering the philosophical advances made in Melville’s prose and poetry.

167 As also the blankness of the working-women of “The Tartarus of Maids” form a white continuum with the paper they produce.
Bibliography

Introduction


---------. *Getting Back into Place: Toward a Renewed Understanding of the Place-World*. Bloomington and Indianapolis: Indiana Univ. Press, 1993.


Chapter 1 (Edwards)


Chapter 2 (Emerson)


**Chapter 3 (Thoreau)**


250


**Chapter 4 (Melville)**


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