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Speaking a Word for Nature: Science and Poetry in the Rhetoric of Thoreau's Transcendental Ecology

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One of Henry David Thoreau's great accomplishments was to develop a form of rhetoric that combined elements of both transcendentalism and empiricism for the purpose of bridging the divide between mind and body, culture and nature, and poetry and science. Content neither with eulogizing Spirit nor categorizing Nature, Thoreau saw science as a poetic art whose function was to reveal the ways in which the human spirit is an interconnected part of the natural environment. Initially a follower of Emerson who saw in Nature evidence of the romantic sublime, Thoreau eventually came to value natural inquiry for its aesthetic and pragmatic consequences. The focus on his essay, however, is how this attitude also produced rhetorical consequences. Specifically, I show how Thoreau developed what I call the rhetoric of Transcendental Ecology that employs the language of science and poetry to make possible the anticipation of beauty so that the audience recognizes, values, and preserves their vital connection with Nature.

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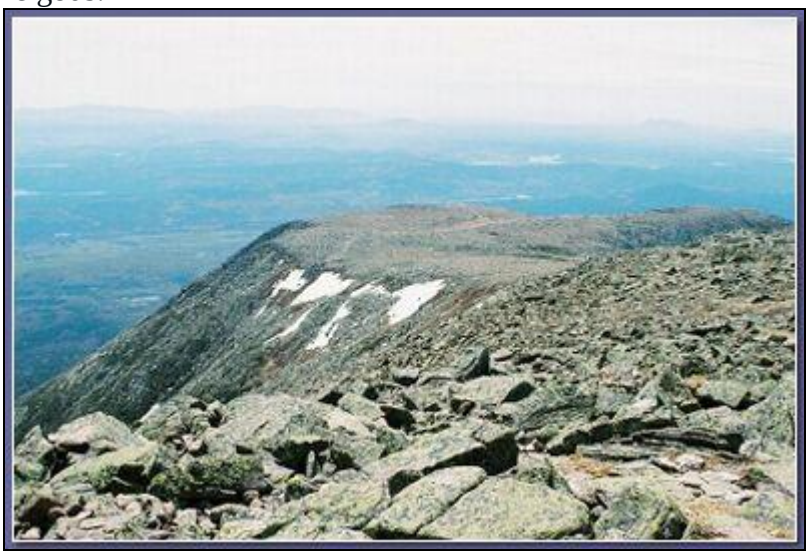
> I stand in awe of my body, this matter to which I am bound has become so strange to me. I fear not spirits, ghosts, of which I am one,--*that* my body might,--but I fear bodies, I tremble to meet them. What is this Titan that has possession of me? Talk of mysteries!--Think of our life in nature,--daily to be shown matter, to come in contact with it,--rocks, trees, wind on our cheeks! the *solid* earth! the *actual* world! the *common sense*! *Contact*! *Contact*! *Who* are we? *where* are we?
>
> (Thoreau, 1848/1985, p. 646; emphasis in original)

Nothing in Thoreau's writing compares to the raw, breathless, energy of the poetic rendering of his moment of catharsis on ascending Mt. Ktaadn in 1846. Standing on the summit of the ridge within the skirts of the clouds, Thoreau felt like Prometheus strapped to the rock of Caucasus on which "Vast, Titanic, inhuman Nature has got him at disadvantage, caught him alone, and pilfers him of some of his divine faculty" (1848/1985, p. 640). Compared with the tranquility of a pastoral landscape, "Nature was here something savage and awful, though beautiful," for "this was that Earth of which we have heard, made out of Chaos and Old Night" (p. 645). Yet the experience does not alienate him from Nature; to the contrary, it provides him what he calls in ***Walden*** "the tonic of wildness" to cleanse him of the lethargy of social routine (1854/1985, p. 575). As he writes: "We can never have enough of Nature. We must be refreshed by the sight of inexhaustible vigor, vast and Titanic features, the sea-coast with its wrecks, the wilderness with its living and its decaying trees, the thunder cloud, and the rain which lasts three weeks and produces freshets. We need to witness our own limits transgressed" (1854/1985, p. 575). The cry for "*Contact! Contact!*" embodies the conflict between the desire for transgression and the fear of what that transgression will bring--the realization that we are mortal beings who live our lives in nature, sharing common sense with the birds and the muskrats, abiding in the shadow of Titanic Nature, yet struggling always to scale the cliffs of Olympus to step foot into the empire of the gods.



(Mt. Ktaadn, 2004)

Although one can easily explain this climactic passage in "Ktaadn" as merely an "exercise in romantic literary sublimity" (Buell, 1995a, p. 12), I believe it more appropriately represents the principle creative tension in Thoreau's work between the rational ideals of Transcendentalism and the empirical spirit of Science. In short, what makes Thoreau's writing so powerful is his ability to synthesize the competing discourses of science and poetry into an early ecological rhetoric that sought to alter our relationship with the natural environment by articulating higher ideals that revealed the depth of our connection with nature. For example, the very order of the questions "*Who* are we? *Where* are we?" signals that the answer to the first question lies in the answer to the second; we find who we are be searching *around* us rather than just *within* or *beyond* us; we seek contact with the solid earth of the actual world to reveal our connection with the home in which we dwell. In the case of Ktaadn, this contact provides Thoreau with the important realization that Nature is not always "man's garden," (1848/1985, p. 645) but a force that can threaten and overwhelm. However, this reveals but one side of our relationship with Nature. On the other side lies the realization, based on his more frequent observations of environmental degradation of his native Concord, that "by his mere presence, [man] changes the nature of the trees as no other creature does" (1858/1985, p. 708). From this perspective, far from being a helpless victim of Titanic Nature, humans become Titans themselves, full of power but lacking the virtues and knowledge to sustain their kingdom and retain its beauty. Speaking of Nahant, the once heavily forested peninsula near Boston, the conservationist side of Thoreau leads him to observe with disgust:

> The very willow-rows lopped every three years for fuel or powder,--and every sizable pine and oak, or other forest tree, cut down within the memory of man! As if individual speculators were to be allowed to export the clouds out of the sky, or the stars out of the firmament, one by one. We shall be reduced to gnaw the very crust of the earth for nutriment (1858/1985, p. 710).

(Nahant, 1873)

Although the two relationships sketched by Thoreau might appear to be contradictory--one viewing humans as puny and helpless before Nature's vastness, and the other viewing humans as god-like brutes uprooting Nature's garden--Thoreau actually uses these competing images rhetorically to propose a third way that lies between viewing Nature as a sublime mystery to be revered and a material resource to be exploited. This third way is based on the ecological premise that human beings influence and are influenced by the environment and hence should develop a more harmonious attitude toward the natural surroundings for the end

of realizing a higher life. The basis for this Transcendental Ecology is perhaps best stated in the introduction to his essay "Walking," in which he reveals his intention to "to speak a word for Nature, for absolute freedom and wildness, as contrasted with a freedom and culture merely civil,--to regard man as an inhabitant, or a part and parcel of Nature, rather than a member of society" (1862/2002b, p. 149). Contrary to popular assumption, Thoreau did not advocate rejecting society and in favor of primitivism. Rather, he sought to improve the human condition by revealing our unspoken dependence on the environment as a resource for cultural growth and spiritual inspiration. Looking to history, Thoreau observes that:

> the civilized nations--Greece, Rome, England--have been sustained by the primitive forests which anciently rotted where they stand. They survive as long as the soil is not exhausted. Alas for human culture! little is to be expected of a nation, when the vegetable mould is exhausted, and it is compelled to make manure of the bones of its fathers. There the poet sustains himself merely by his own superfluous fat, and the philosopher comes down on his marrow-bones (1862/2002b, p. 165).

Thoreau implies in this passage that Nature is a contingent resource rather than a divine gift, and that we are as much servants as we are masters of the soil and forests. It is for this reason that Thoreau's Transcendental Ecology speaks more to the modern scientific temperament than the Transcendentalism of his mentor, Emerson. Although both shared the general Transcendentalist assumption that investigating Nature's laws is one way to become aware of Higher Laws, Thoreau came to see the source for Higher Law rooted less in a supernatural Spirit and more within the totality of Nature itself. For Emerson, observation and description of Nature is important only because he believed "words are signs of natural facts," and "every natural fact is a symbol of some spiritual fact" (1836/1950, pp. 14-15). Thus, Emerson employs Natural facts rhetorically to disclose an underlying order of God that pervades all things. However, Emerson's "facts" are neither organized into any coherent system nor embodied in any empirical law; the only theory he defends is an abstract natural theology that sees "the natural world as a centerpiece of the revelation of religious truth to humanity" (Robinson, 2004, 95). In this worldview, Nature is benevolent, ordered, and progressive, and its mysteries are revealed not through a rigorous empiricism, but through romantic intuition. Thoreau expresses a similar perspective in an early work written when he was most heavily under the influence of Emerson. In "A Natural History of Massachusetts," Thoreau argues not only that "science is always brave" because "to know is to know good" (1842/2002, p. 6), but also goes on to outline what seems to be a most un-scientific "man of science":

> Wisdom does not inspect, but behold…The true man of science will know nature better by his finer organization; he will smell, taste, see, hear, feel, better than any other man. 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 (1842/2002, pp. 22-23).

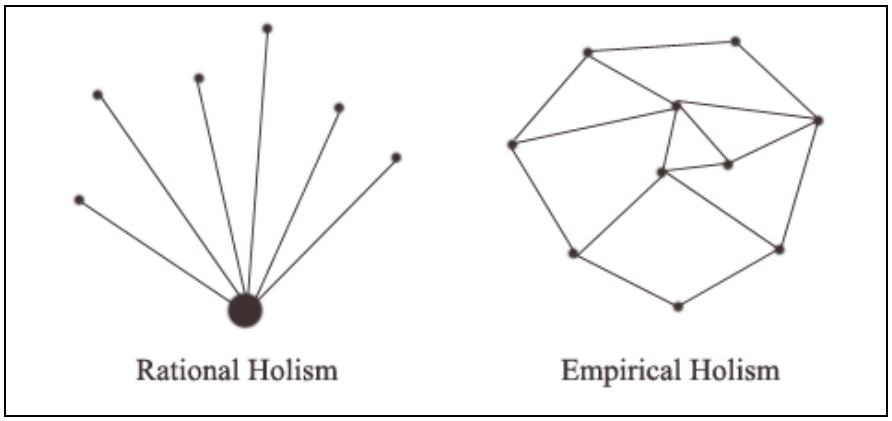
In this essay, Thoreau identifies science with ethics and privileges "sympathy" over "method," but even here he seeks a more natural "Indian wisdom" rather than a philosopher's transcendence. Consequently, his desire to make Nature more meaningful rather than more transparent led to his creation of a wholly different rhetorical form than the one used by Emerson. Although Thoreau never overcame his general antipathy for so-called "Baconian" styles of scientific inquiry that stress classification and objectivity at the expense of imagination and feeling, he eventually came to appreciate how the systematic description of Nature could aid in the cultivation of the "art of life" (1854/1985, p. 363). Consequently, Thoreau's rhetorical style changed considerably in the last decade of his life and came to rely less on an idealized conception of knowledge and more on a detailed description of subtle natural processes and their relation to pragmatic use and aesthetic enjoyment.

It is generally accepted that Thoreau attempted some sort of transition from idealist to empiricist; the larger debate centers around the degree to which it occurred and whether that transition was successful (See, for instance, Baym, 1965; Berger, 2000; Buell 1995a, 1995b; Harding, 1981; Richardson, 1992; Robinson, 2004; Rossi, 1993; Walls 2000, 1995, 1993). For instance, in her landmark essay, "Thoreau's View of Science," Nina Baym (1965) considers his attempt to shift into empirical modes of thinking an ultimate failure. From her perspective, after Thoreau accepts, "at long last, that God would not make him a partner, he contents himself with learning nature for pleasure…Fine discrimination and detailed knowledge is to be cultivated as an aid to appreciation; the transcendental position towards nature must be that of the informed amateur" (p. 228). The problem Baym identifies with this conclusion is that Thoreau could never fully accept it. Giving up on his idealist aims to settle for an amateur's notebook was too much a sacrifice, for it would have forced him to come to terms with what Baym calls "a world in which men were irrelevant" (p. 234). Consequently, she portrays Thoreau in his later years as a tormented ecologist, distrustful of a "Baconian" worldview that strips the universe of higher meaning yet inextricably attracted to the modern discourse of science. Undoubtedly, such an interpretation has clear textual support. Observe, for instance, these two journal entries, written just days apart in 1851:

> August 19, 1851: I fear that the character of my knowledge is from year to year becoming more distinct and scientific: that in exchange for views as wide as heaven's scope, I am being narrowed down to the field of the microscopic. I see details, not wholes nor the shadow of the whole. I count some parts and say, 'I know' (1990, p. 380).
>
> August 20, 1851: How copious and precise the botanical language to describe the leaves, as well as the other parts of a plant! Botany is worth studying if only for the precision of its terms--to learn the value of words and of system (1990, p. 382).
> Despite the tension inherent in these two entries, the view that Thoreau was a failed

Transcendentalist is no longer universally accepted. Most notably, Laura Walls (2000, 1995, 1993) has persuasively argued that Thoreau eventually formed a perspective that bridged the gap between rationalism and empiricism. Placing heavy emphasis on the writings of naturalists like Alexander von Humboldt and Charles Darwin, Walls describes how Thoreau drifted away from Emersonian "rational holism," which "conceived the mechanico-organic

whole as a divine or transcendent unity fully comprehended only through thought," in favor of a brand of "empirical holism" which was "an emergent alternative which stressed that the whole could be understood only by studying the interconnections of its constituent and individual parts" (1995, p. 4). In the latter worldview, the mind no longer seeks to transcend the body, but rather strives to achieve a more productive union with it through contact with Nature. As Walls (2000) explains, "once we are engrossed in the fields of nature, the act of perception draws us ever deeper into the absorbing complexities of natural phenomena, and the self, now fully embodied, acts not as an agent of transcendence but as the independent site for experience in the world" (p. 23). To exemplify the differences between the two worldviews, Walls (1993, p. 56) uses a diagram similar to the one below to contrast rational holism, in which all particulars facts radiate from a single Divine Law, or Logos, with empirical holism, in which natural laws are products of the sum total of interactions of those facts:



Although Walls's pictorial representation primarily symbolizes the scientific aspect of Thoreau's mature worldview, it also has poetic and literary implications. For Walls, Thoreau not only solves a philosophical problem but also a discursive one--how to bring together the empirical spirit of science with aesthetic spirit of poetry. For the problem with "rational holism" is that it makes science the servant of poetic truth, thus rendering it narrow and dogmatic. In contradistinction, "empirical holism" conceives both science and poetry as emergent disciplines that grow out of our immediate experience with actual events and objects and "converge in recreating within the mind of the reader the experience and vision of the writer" (2000, p. 22). In other words, rather then being subservient to conveying some supernatural truth, science and poetry work cooperatively to enrich experience through the progressive construction of wider and more interconnected meanings that fuse cognition and feeling. We find evidence for this interpretation in the following journal entry where Thoreau considers the fundamental connection between the two genres:

> I have a common-place book for facts and another for poetry, but I find it difficult always to preserve the vague distinction which I had in my mind, for the most interesting and beautiful facts are so much the more poetry and that is their success. They are *translated* from earth to heaven. I see that if my facts were sufficiently vital and significant,--perhaps transmuted more into the substance of the human mind,--I should need but one book of poetry to contain them all (1992, p. 356; emphasis in original).

What I explore for the remainder of this essay is how Thoreau created a rhetorical form of Transcendental Ecology that blended the language of science with the language of poetry to transform natural events, objects, and process into vital, significant, and beautiful facts that brought together earth and heaven through a proto-ecological worldview. With more specific goals and methods than Thoreau's general perspective toward eloquence (Campbell, 1990), the rhetorical form of Transcendental Ecology is derived from five basic principles. First, as indicated by his reflections on the rise and fall of civilizations, humans are natural beings who influence and are influenced by their environment. Second, because we are natural beings who cannot escape our bodies, individual perception is by necessity subjective and selective such that the quality and content of our observation is relative to our feelings, dispositions, and interests. Thoreau clearly expresses this epistemological notion in his journal: "There is no such thing as *pure objective* observation. Your observation, to be interesting, *i.e.* to be significant, must be *subjective.* The sum of what the writer of whatever class has to report is simply some human experience, whether he be poet or philosopher or man of science" (1906, VI, p. 236-37; emphasis in original). Although it is possible to take such a claim as evidence observation, being subjective, is therefore dubious, Thoreau adopts a poetic stance that embraces the integrity of experience in its totality. This stance is embodied in the third principle that although our selective experience with Nature is always subjective, it nonetheless conveys real aspects of the actual world in which we inhabit and of which we are a part. These aspects are not discerned through Emerson's "transparent eyeball" (Emerson, 1836/1950, p. 6) but through experience as a *function* of the body. Indeed, for Thoreau, direct experience with bodies, although sometimes causing him to "tremble" as in Ktaadn, is necessary for the providing the raw material for the production of worthwhile art. As he writes in his journal, "first of all a man must see, before he can say…See not with the eye of science, which is barren, nor of youthful poetry, which is impotent. But taste the world and digest it" (1990, pp. 85-86). Neither science nor poetry can merely be the result of carefully honed style or method refined in the classroom or the study, but must spring from direct contact with nature that has been digested over time in memory or art and then used to enrich future experience. This process of "digestion" embodies the spirit of science and is expressed in the fourth principle that the function of science is to discover natural laws by investigating the interconnections of natural facts. These last two ideas are best exemplified in the following passage from *Walden*, which reveals his embrace of systematic empirical inquiry as a means of achieving a greater understanding and harmony with natural laws:

> If we knew all the laws of Nature, we should need only one fact, or the description of one actual phenomenon, to infer all the particular results at that point. Now we know only a few laws, and our result is vitiated, not, of course, by any confusion or irregularity in Nature, but by our ignorance of essential elements in the calculation. Our notions of law and harmony are commonly confined to those instances which we detect; but the harmony which results from a far greater number of seemingly conflicting, but really concurring, laws, which we have not detected, is still more wonderful. The particular laws are as our points of view, as, to the traveler, a mountain outline varies with every step, and it has an infinite number of profiles, though absolutely but one form. Even when cleft or bored through it is not comprehended in its entireness (1854/1985, pp. 353-354).

If Thoreau's concern was only the empirical discovery of scientific laws, then the first four principles would be sufficient to provide a workable framework for inquiry. However, what distinguishes Thoreau from other like-minded empiricists is his transcendental temperament that values knowledge only insofar as it elevates the human spirit toward a higher good. This fifth principle then leads to its rhetorical culmination within a discourse that poetically interprets natural laws so as to give depth, quality, and purpose to human experience. Thoreau (1849/1985) initiated this rhetorical project of poeticizing and humanizing science in his first, "youthful," book, *A Week on the Concord and Merrimack Rivers*, in which he confesses that "My friends mistake when they communicate facts to me with so much pains…I have no respect for facts even except when I would use them...and can afford to be inaccurate, or, in other words, to substitute more present and pressing facts in their place" (p. 295). Consequently, he concludes, "the poet uses the results of science and philosophy, and generalizes their widest deductions" (p. 295). In Platonic terms, the poet makes Truth both Beautiful and Good. In public discourse, however, making such rhetoric effective also requires a *mythos* that binds together facts into a common narrative. Thus we find Thoreau in 1851 acknowledging that he was building not an empirical system but a mythological one:

> I, too, would fain set down something besides facts. Facts should only be as the frame to my pictures--They should be material to the mythology which I am writing…I would so state facts that they shall be significant shall be myths or mythologic. Facts which the mind perceived--thoughts which the body thought with these I deal-- (1992, p. 170).

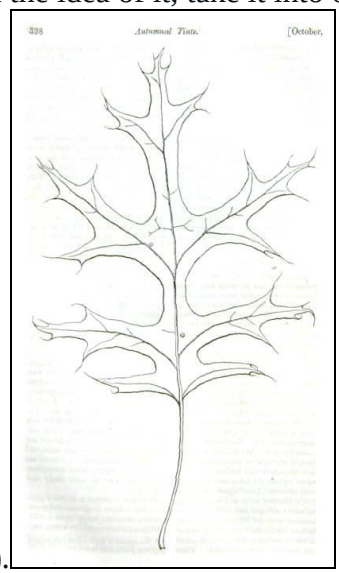
Thoreau's shift from his early emphasis on intuition and sympathy to his mature focus on the construction of a mythology that gives poetic significance to empirical facts corresponds to a shift from the rhetoric of Transcendentalism to the rhetoric of Transcendental Ecology. As Buell (1995b) points out, "what motivated Thoreau, as he sought to arrange his data, was not the desire for empirical knowledge alone but also the desire for patterns of significance" (p. 182). These "patterns" formed the basis for a discourse that portrays Nature as something to be neither perfectly preserved nor crassly utilized, but to be sustainably managed so that it can be aesthetically experienced. This discourse is properly termed *rhetoric* because Thoreau wrote to change attitudes and encourage behaviors in response to the environmental and social exigencies of his time, not simply to express personal ideals or create images of beauty. Specifically, the rhetoric of Transcendental Ecology encourages an intelligent and sympathetic management of the natural environment for the purposes of enriching individual experience and civic culture. These goals appear at the end of his essay "Chesuncook," in which Thoreau (1858/1985) champions a balanced approach to conservation. On the one hand, he acknowledges the value of the pastoral landscape in which humans are a part of the environment, noting that "the poet's, commonly, is not a logger's path, but a woodman's," for "the partially cultivated country it is which chiefly has inspired, and will continue to inspire, the strains of poets, such as compose the mass of any literature" (p. 711-712). Indeed, Thoreau expresses his own "relief to get back to our smooth, but still varied landscape," after having spent time in the Maine Woods (p. 711). On the other hand, he also recognizes the need for purely "wild" places untouched by humankind. He writes that "not only for strength, but for beauty, the poet must, from time to time, travel the logger's path and the Indian's trail, to drink at some new and more bracing fountain of the Muses, far in the recesses of the wilderness" (p.

712). Consequently, to prevent such places from being "civilized off the face of the earth," Thoreau asks why we should not have "national preserves" in which the bear and panther still exist, that are "not for idle sport or food, but for inspiration and our own true re-creation?" (p. 712). In other words, because the ultimate end of Transcendental Ecology is a humanist one, the explicit policy goals of managing the pastoral landscape and preserving wild nature are justified on the basis of their value to human experience.

Of course, the challenge to any rhetoric is not merely to state goals but to motivate audiences to accepts and work toward them. In the case of Thoreau, his end is to discover a way to use science and poetry as a means of "provoking social reflection and change" regarding our relationship with the natural world (Buell, 1995b, p. 185). We find the best examples of such rhetoric in his later essays, "The Succession of Forest Trees" (1860), "Wild Apples" (1962), and "Autumnal Tints" (1862), in addition to his recently published posthumous books, *Wild Fruits* and *The Dispersal of Seeds*, all of which "continue the aspirations and inspirations of Transcendentalism under the restrictions of the modern empirical temper" (Berger, 2000, p. 13). Compared to Thoreau's early rhetorical strategies that rely on moral exhortation and philosophical rumination, in these later works we find an "increasing mastery of empirical observation merged with a still vibrant philosophical idealism and a continuing appreciation of the poetics of nature" (Robinson, 2004, p. 201). I believe the most effective of these from a rhetorical perspective is "Autumnal Tints." Nominally a description of the vibrant colors one can find in the New England forests in autumn, this essay endeavors to reveal how knowledge of natural processes not only increases aesthetic pleasure by educating and directing individual perception, but also enhances ecological awareness of the interdependence of culture and environment. Thoreau (1862/2002a) lays the groundwork for these persuasive effects by establishing for his audience the value of educating one's senses. He explains:

> 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; for there is no power to see in the eye itself, any more than in any other jelly…The greater part of the phenomena of Nature are for this reason concealed from us all our lives…There is just as much beauty visible to us in the landscape as we are prepared to appreciate,--not a grain more. The actual objects which one man will see from a particular hill-top are just as different from those which another will see as the beholders are different. The scarlet oak must, in a sense, be in your eye when you go forth. We cannot see

anything until we are possessed with the idea of it, take it into our heads,--and then we can hardly see anything else (p. 240).



(Illustration from Thoreau's original *The Atlantic Monthly* article, 1862)

Given our native capacity to enrich our perceptions, the pervasive exigence Thoreau identified was the trained incapacity for people to see anything beyond what is merely useful for their own immediate interests. As Thoreau narrates, "a man shall perhaps rush by and trample down plants as high as his head, and cannot be said to know that they exist, though he may have cut many tons of them, littered his stables with them, and fed them to his cattle for years" (p. 222). Yet this blindness represents more than a mere tragedy of unseen beauty. When a whole people are blind to nature's value, their language and thought dries and withers; they will "accept the most barren and forlorn doctrine" and "will perchance crack their dry joints at one another and call it a spiritual communication" (p. 235). The reason for their cultural poverty is that "a village needs these innocent stimulants of bright and cheering prospects to keep off melancholy and superstition" (p. 234). Reaffirming our spiritual dependence on Nature, Thoreau writes: "show me two villages, one embowered in trees and blazing with all the glories of October, the other a merely trivial and treeless waste, or with only a single tree or two for suicides, and I shall be sure that in the latter will be found the most starved and bigoted religionists and the most desperate drinkers" (p. 235). By drawing out the disastrous social consequences of environmental degradation, Thoreau rhetorically establishes the mutual importance of educating perceptions and conserving an environment worth perceiving.

However, these sociological and philosophical justifications only lay the groundwork for the larger challenge--to rhetorically transform a scientific understanding of such things as tree and soil biochemistry into a poetic guide for experiencing Nature. Thoreau's strategy for addressing this challenge takes two forms. The first strategy places immediate perception in the context of *time* by portraying a particular phenomenon as the outcome of past processes and a harbinger of future events. The purpose is both to enrich aesthetic meaning and create environmental awareness. Take Thoreau's account of the ecological importance of trees shedding their leaves every year. Thoreau complains that "while I chaffer with this man and that, who talks to me about sulpher and the cost of carting," his audience remains ignorant of

how the forest does naturally what humans do clumsily and with great toil (p. 230). For with every falling leaf, "trees are now repaying the earth with interest what they have taken from it. They are about to add a leaf's thickness to the depth of the soil," and "we are all the richer for their decay" (p. 230). Our reward is both practical and aesthetic. On the one hand, the autumn foliage "prepares the virgin mould for future cornfields and forests, on which the earth fattens," and hence "keeps our homestead in good heart" (p. 230). On the other hand, simply witnessing, with educated eyes, the process as it occurs over seasons and years has its own intrinsic reward. For Thoreau, no crop compares in beauty to the leaves of autumn:

> The frost touches them, and, with the slightest breath of returning day or jarring of earth's axle, see in what showers they come floating down! The ground is all party-colored with them. But they still live in the soil, whose fertility and bulk they increase, and in the forests that spring from it. They stoop to rise, to mount higher in coming years, by subtle chemistry, climbing by the sap in the trees, and the sapling's first fruits thus shed, transmuted at last, may adorn its crown, when, in after-years, it has become the monarch of the forest (p. 230).

(Scarlet Oak)

The pleasure we receive by historicizing natural phenomena thus derives from expectation and reflection, both relying on the ability the imagination to place an immediate perception in the context of time. This pleasure is then magnified by the second rhetorical strategy, which is to differentiate and see the relations between objects and events in *space*. Here we find the poetic value of the "barren" scientific terminology Thoreau so often critiques. Following from his theory of perception, the act of naming refines our vision and creates the ability to make subtle distinctions. This process not only aids in the systematic investigation of natural processes, but also trains us in the art of observation. As Rossi (1993) observes, Thoreau believed that "the more familiar one is with one's surroundings the more one is likely to make discoveries, both aesthetic and scientific" (p. 70). By naming, featureless space takes on subtlety and nuance, and these details make possible moments of poetic meaning in which disconnected particulars are given aesthetic form via language and art. Thoreau describes both the practical and aesthetic value of scientific language in this journal entry from 1858:

> How hard one must work in order to acquire his language, --words by which to express himself! I have known a particular rush, for instance, for at least twenty years, but have ever been prevented from describing some its peculiarities, because I did not know its

> name nor any one in the neighborhood who could tell me it. With the knowledge of the name comes a distincter recognition and knowledge of the thing. That shore is now more describable, and 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 (1906, XI, p. 137).

"Autumnal Tints" is in many ways simply an application of this aesthetic principle. For example, Thoreau (1862/2002a) describes how he came to appreciate a "very interesting genus of grasses, andropogons, or beard-grasses," which include "*Andropogon furcatus*, forked beard-grass, or call it purple-fingered grass; *Andropogon scoparius*, purple wood-grass; and *Andropogon* (now called *Sorghum*) *nutans*, Indian-grass" (p. 221). Latin names on their own are merely components of dry terminology; applied to perception they become a means to an aesthetic end. Thoreau writes that before he had learned to distinguish one from the other, "I had not known by how many friends I was surrounded,--I had seen them simply as grasses standing"; but now "the purple of their culms also excites me like that of the poke-weed stems" (p. 222). Thoreau then proceeds to describe the tints of the red maple, the elm, the sugar maple, the scarlet oak, and an assortment of other grasses and weeds, concluding with an appeal to his audience to begin "to observe faithfully the changes of each humblest plant" and "understate to make a complete list of the bright tints" (p. 242). For like the sharpshooter who bags his game because he knows what to expect, "so is it with him that shoots at beauty; though he wait till the sky falls, he will not bag any, if he does not already know its seasons and haunts, and the color of its wing,--if he has not dreamed of it, so that he can *anticipate* it" (p. 241; emphasis in original). Thus, Thoreau's task in "Autumn Tints" is the same as that of the rhetoric of Transcendental Ecology in general--*to use the language of science and poetry to make possible the anticipation of beauty so that the audience recognizes, values, and preserves their vital connection with Nature*.

The spirit of Thoreau's Transcendental Ecology has a particularly modern flavor. However, one must observe an important irony in his later writings. At the same time that he anticipates contemporary ecological notions in his attitude toward Nature, he simultaneously advocates a more militant Transcendentalism in his stance on politics (See Funk, 1972; Johnstone 1974). For instance, in "Slavery in Massachusetts" he argues that rather than follow the laws of an unjust government, "I need not say what match I would touch, what system endeavor to blow up,--but as I love my life, I would side with the light, and let the dark earth roll from under me, calling my mother and my brother to follow" (1854/2002, p. 189). Instead of a rhetoric based on a well-developed scientific understanding of process and perception, Thoreau justifies violent revolution on the basis of an abstract and undefined *a priori* ideal. Yet this apparent paradox actually follows from Thoreau's own philosophy. As he writes in "Autumn Tints," the "hen scratches and finds her food right under where she stands; but such is not the way with the hawk" (1862/2002a, p. 242). Thoreau stood most of his life in the fields and forests around Concord, happy to stay arms-length from the institutions of civil society, preferring instead to play the role of iconoclast. Consequently, when Thoreau stepped onto the political stage, he spoke as a hawk would do in a henhouse--with profound disdain for a life pecking scraps in a cage combined with a willful ignorance of its subtleties and complexities. In his eulogy of Thoreau, Emerson (1862/1950) wrote that he "knew the country like a fox or a bird, and passed through it as freely by paths of his own," and yet "his aversion from English

and European manners and tastes almost reached contempt…and though he tried to be civil, these anecdotes fatigued him" (p. 899). As a result of these competing attitudes, Thoreau was able to develop a sophisticated rhetoric that could both predict and glorify the succession of forests and yet often was reluctant to apply similar ecological insights to broaden our understanding of the complex moral and political problems of his age. So when John Brown was about to be hung after his raid on Harper's Ferry, Thoreau did not systematically chart the American political landscape; he preferred instead to deify Brown as an "Angel of Light" (1860/2000c, p 279).

Over a century has passed since Thoreau's death in 1862, yet we are still learning the rhetorical lessons of his Transcendental Ecology. Instead of bridging the discourses of science and art for the purposes of cultural enrichment and natural preservation, we too often resort to *a priori* moral dictums to resolve complex exigencies while the resources of science and art go unused in their specialized pigeon-holes. We may "know" more about global climate and the problems of globalization, but this knowledge remains impotent and blind until art opens its eyes and rhetoric gives it a voice. Until then, we use science merely to document the decline while art portrays its tragedy. Of course, one might simply abandon the hope for enlightenment as naïve. Thoreau (1860/2002d) himself once complained "men love darkness rather than light," for he saw that we are surrounded every day with "the value which gold merely represents," and "yet farmers' sons will stare by the hour to see a juggler draw ribbons from his throat, though he tells them it is all deception" (p. 258). But I do not believe Thoreau truly held such a view, for then he would not have struggled so hard to bring light into the world. Darkness is indeed prevalent, but it is not inevitable. There is such a thing as faith in the wisdom of beauty and possibilities of intelligence. Our challenge is to construct a rhetoric that does justice to this faith. Thoreau provides an early framework with his Transcendental Ecology, but he drew back at the sight of a juggler's ribbons. A truly Ecological Humanism will digest every fact of nature, ribbons and all.

Works Cited

Baym, N. (1965). Thoreau's View of Science. *The Journal of the History of Ideas*, *26*: 221-234. http://thoreau.eserver.org/science.html

Berger, M. B. (2000). *Thoreau's Late Career and the Dispersion of Seeds*. Rochester, NY: Camden House.

Buell, L. (1995a). *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge: The Belknap Press of Harvard University Press.

_____. (1995b). Thoreau and the Natural Environment. In Joel Myerson (Ed.). *The Cambridge Companion to Henry David Thoreau*. Cambridge: Cambridge University Press, pp. 171-193.

Campbell, J. L. (1990). "It is as if a green bough were laid across the page": Thoreau on Eloquence. *Rhetoric Society Quarterly*, *20*: 61-70.

Emerson, R.W. (1950). Thoreau. In Brooks Atkinson (Ed.). *The Complete Essays and Other Writings of Ralph Waldo Emerson*. New York: The Modern Library, pp. 895-916. (Original Work Published 1862)

_____. (1950). *Nature*. In Brooks Atkinson (Ed.). *The Complete Essays and Other Writings of Ralph Waldo Emerson*. New York: The Modern Library, pp. 3-44. (Original Work Published 1836)

Funk, A. A. (1972). Henry David Thoreau's "Slavery in Massachusetts." *Western Speech, 36*: 159-168.

Harding, W. (1981). Walden's Man of Science. *The Virginia Quarterly Review, 57*: 45-61.

Johnstone, C. L. (1974). Thoreau and Civil Disobedience: A Rhetorical Paradox. *Quarterly Journal of Speech, 60*: 313-322.

Richardson, Jr., R. D. (1992). Thoreau and Science. In Robert J. Scholnick (Ed.). *American Literature and Science*. Lexington: University Press of Kentucky, pp. 110-127. http://www.wesleyan.edu/synthesis/Synthesis/Thoreau.html

Robinson, D. M. (2004). *Natural Life: Thoreau's Worldly Transcendentalism*. Ithaca, NY: Cornell University Press.

_____. (1992). Fields of Investigation: Emerson and Natural History. In Robert J. Scholnick (Ed.). *American Literature and Science*. Lexington: University Press of Kentucky, pp. 94-109.

Rossi, W. (1993). Thoreau as a Philosophical Naturalist-Writer. In Edmund A. Schofield and Robert C. Baron (Eds.). T*horeau's World and Ours: A Natural Legacy*. Golden, CO: North American Press, pp. 64-76.

Thoreau, H. D. (2002a). Autumnal Tints. In Lewis Hyde (Ed.). *The Essays of Henry David Thoreau*. New York: Farrar, Straus, and Giroux, pp. 217-242. (Original Work Published 1862)

_____. (2002b). Walking. In Lewis Hyde (Ed.). *The Essays of Henry David Thoreau*. New York: Farrar, Straus, and Giroux, pp. 149-177. (Original Work Published 1862)

_____. (2002c). "A Plea for Captain John Brown." In Lewis Hyde (Ed.). *The Essays of Henry David Thoreau*. New York: Farrar, Straus, and Giroux, pp. 261-280. (Original Work Published 1860)

_____. (2002d). The Succession of Forest Trees. In Lewis Hyde (Ed.). *The Essays of Henry David Thoreau*. New York: Farrar, Straus, and Giroux, pp. 245-258. (Original Work Published 1860)

_____. (2002). Slavery in Massachusetts. In Lewis Hyde (Ed.). *The Essays of Henry David Thoreau*. New York: Farrar, Straus, and Giroux, pp. 181-194. (Original Work Published 1854)

_____. (2002). A Natural History of Massachusetts. In Lewis Hyde (Ed.). *The Essays of Henry David Thoreau*. New York: Farrar, Straus, and Giroux, pp. 1-23. (Original Work Published 1842)

_____. (1992). *Journal*, Vol. 4: *1851-1852*. Ed. Leonard N. Neufeldt and Nancy Craig Simmons. Princeton: Princeton University Press.

_____. (1990). *Journal*, Vol. 3: *1848-1851*. Ed. Robert Sattelmeyer, Mark R. Patterson, and William Rossi. Princeton: Princeton University Press.

_____. (1985). Chesuncook. In *Henry David Thoreau: A Week on the Concord and Merrimack Rivers, Walden; or Life in the Woods, The Maine Woods, Cape Cod*. New York: Library Classics of the United States, pp. 656-712. (Original Work Published 1858)

_____. (1985). *Walden; or Life in the Woods*. In *Henry David Thoreau: A Week on the Concord and Merrimack Rivers, Walden; or Life in the Woods, The Maine Woods, Cape Cod*. New York: Library Classics of the United States, pp. 321-587. (Original Work Published 1854)

_____. (1985). *A Week on the Concord and Merrimack Rivers*. In *Henry David Thoreau: A Week on the Concord and Merrimack Rivers, Walden; or Life in the Woods, The Maine Woods, Cape Cod*. New York: Library Classics of the United States, pp. 1-319. (Original Work Published 1849)

_____. (1985). Ktaadn. In *Henry David Thoreau: A Week on the Concord and Merrimack Rivers, Walden; or Life in the Woods, The Maine Woods, Cape Cod*. New York: Library Classics of the United States, pp. 593-655. (Original Work Published 1848)

_____. (1984). *Journal*, Vol. 2: *1842-1838*. Ed. Robert Sattelmeyer. Princeton: Princeton University Press.

_____. (1981). *Journal*, Vol. 1: *1838-1844*. Ed. Elizabeth Hall Witherell, William L. Howarth, Robert Sattelmeyer, and Thomas Blanding. Princeton: Princeton University Press.

_____. (1906). *The Journal of Henry David Thoreau*. 14 vols. Ed. Bradford Torrey and Francis Allen. Boston: Houghton Mifflin.

Walls, L. (2000). Believing in Nature: Wilderness and Wildness in Thoreauvian Science. In Richard J. Schneider (Ed.). *Thoreau's Sense of Place: Essays in American Environmental Writing*. Iowa City: University of Iowa Press, pp. 25-27.

_____. (1995). *Seeing New Worlds: Henry David Thoreau and Nineteenth-Century Natural Science.* Madison: University of Wisconsin Press.

_____. (1993). Seeing New Worlds: Thoreau and Humboldtian Science. In Edmund A. Schofield and Robert C. Baron (Eds.). *Thoreau's World and Ours: A Natural Legacy*. Golden, CO: North American Press, pp. 55-63.