American Georgics

Economy and Environment in Early American Literature

TIMOTHY SWEET

University of Pennsylvania Press
Philadelphia

2002
Introduction

"The earth . . . has a certain magnetism in it, by which it attracts the salt, power, or virtue (call it either) which gives it life, and is the logic of all the labor and stir we keep about it, to sustain us." So writes Henry David Thoreau in the "Bean-Field" chapter of Walden, quoting the seventeenth-century English agricultural writer John Evelyn. That logic—the magnetism that draws labor from us as we draw sustenance from the earth—is the subject of this book. It is, as Thoreau's experiment at Walden Pond indicated, at once simple and complex, according to one's field of vision.

To make his living, Thoreau labored in his bean field. But he did not eat the beans he grew; rather he exchanged them for rice, corn meal, rye meal, and other commodities. Whether, as he says, he wanted to follow the Pythagorean dietary maxim or whether he thought it "fit that [he] should live on rice, mainly, who loved so well the philosophy of India," in his simple acts of satisfying his ascetic taste he depended on the labor of others (61). The "$8[.]74, all told" that he confesses he ate during one eight-month period came to him already planted, cultivated, harvested, threshed, transported from distant environments, milled, and stored (59). All this labor and more remains largely invisible in Walden, reduced to the transactions recorded in Thoreau's ledger sheets. We might not notice its absence at all, but that the very terms of Thoreau's experiment call it forth. Seeing him work his beans—seeing too that he deliberately worked them badly, by his neighbors' standards—we think about the nature of labor. Knowing that he exchanged the beans for the products of others' labor, we come to realize the ways in which acts of production and consumption can connect us to complex and far-reaching social, economic, and environmental networks.

Discerning the traces of these networks in Walden, we begin to reflect on the social and economic aspects of our own, often indirect, engagements with the physical environment. Yet because such reflections may seem incompatible with Thoreau's lived experience of self-sufficiency and his apparently pastoral relation to nature, they may trouble us. They had already troubled Thoreau's sometime mentor Ralph Waldo Emerson.
Although Emerson never lamented, as Thoreau did, that “trade curses everything it handles” (70), he did register an even deeper alienation when he observed, in the conclusion to the “Spirit” chapter of Nature: “Yet this may show what discord is between man and nature, for you cannot freely admire a noble landscape, if laborers are digging in the field hard by.” For Emerson, such a “discord” exceeds the specificity of local economic arrangements to become a general indictment of humankind’s relation to nature.

Let us consider a resolution of the Emersonian discord that depends not on excluding the laborers from the landscape, but rather on understanding how and why they are integral to it. A suggestive direction has recently been proposed, for example, by Brian Donahue. In Reclaiming the Commons, Donahue locates the cause of our environmental crisis in the fact that our economy does not have a sound ecological basis, and argues that environmental protection “will follow from a society that has at last worked out a healthy relation with its everyday landscape, with its productive forests and farmlands.” If we would save the environment for future generations, we must begin not with the part of it that is defined by its separation from us, the wilderness, but rather with that part in which we are already necessarily engaged, whether we realize it or not, as members of the human community.

In the chapters that follow, I trace the early history of such engagements in North America as they are registered in a particular mode of environmental writing, which I am provisionally calling the American georgic. Writings in this mode take as their primary topic the work of defining the basic terms of the human community’s relationship to the natural environment. Since this problem, to the extent that it has been taken up in American literary studies, has generally been thought to lay within the domain of the pastoral tradition—and since georgic has been theoretically bound up with pastoral in a mutually defining relationship—I will begin by making some distinctions, if only to bring an enriched sense of georgic into pastoral broadly construed.

The first of these distinctions goes back to a difference in environmental orientation already evident in the works of Virgil. Where in the Eclogues Virgil understands the natural world primarily as a site of leisure, in the Georgies he understands it primarily as a site of labor. Distinguishing the two modes, Renato Poggioli observes that in pastoral the individual is “the opposite of homo oeconomicus on both ethical and practical grounds.” While this distinction has become blurred since Virgil’s time, I will suggest that it is worth reanimating. I will note here at the outset, however, that I am less attached to the particular term georgic than to the set of concerns I am using the term to indicate.

Such a distinction is implicit in Leo Marx’s foundational study of the American pastoral tradition. Marx identifies a “pastoral design” in texts that set up an ideal, rural landscape and then introduce a counterforce of some kind, a threat of “an alien world encroaching from without.” “Complex” as opposed to “sentimental” pastoral introduces this counterforce in such a way as to prohibit any simple affirmation of the rural scene (25). The key question of affirmation indicates that for Marx, two constitutive features of pastoral are the act of perceiving nature and the emotional response perception triggers. Marx’s focus on attitude allows him, for example, to characterize Thomas Jefferson as a pastoralist rather than an agrarian: the “mythopoetic” power of the pastoral ideal compels Jefferson to ground his ideas of virtue in a particular configuration of landscape even as he “admits that an agricultural economy may be economically disadvantageous” for America (126, 127). Even in this difficult test case then, Marx retains the classical pastoral’s sense that the individual subject is the opposite of homo oeconomicus. Indeed, Marx argues that where the counterforce to classical pastoral was history in general, the predominant counterforce to American pastoral has been history in the specific form of economics, figured in images of technological innovation.

Paul Alpers’s recent work What Is Pastoral? is less concerned with a structure of external threat than with internal qualities, shifting the focus from the perception of landscape to the conditions of human action. Alpers defines the mode in terms of its “representative anecdote”: pastoral is a story of “herdsmen [or their equivalents in a given historical moment] and their lives, rather than landscape or idealized nature.” The herdsman is a representative person, “figuring every or any man’s strength relative to the world.” Even though Alpers is not much interested in American writers (he discusses only Sarah Orne Jewett, Robert Frost, and Wallace Stevens) and is committed to form rather than historical analysis, nevertheless his emphasis on the contents of rural lives, as they reveal a realist sense of human qualities, provides an important guidepost.

Lawrence Buell’s summative definition addresses both Marx’s concern with perceptual attitude and Alpers’s interest in the qualities of human lives. For Buell, “pastoral” refers “broadly to all literature that celebrates an ethos of rurality or nature or wilderness over against an ethos of metropolitanism. This domain includes . . . all degrees of rustication, temporary or longer term, from the greening of cities through metropolitan park projects to models of agrarianism and wilderness homesteading.” The inclusiveness of Buell’s definition, which, he recognizes, blurs the distinction between pastoral and georgic, raises at least two important issues (439). One is the theoretical question of locating human agency with respect to the several domains of the rural, wilderness, or nature in general. Another is the historical question of identifying various ethoi specific to
these domains, which are not coextensive and have each been sites of significant debates.

Taking up the first of these questions, we can observe the production of pastoral sites by means of human agency. Some of this production has been conceptual—as for example the development of the logic of possessive individualism as traced by Myra Jehlen, in which an "American" (that is to say, an Emersonian) self transcends its own mortal limits by taking imaginative possession of an infinite world. Yet the most important aspects of this production have been material, even in cases where we are apparently facing pure nature. For example, we might consider the fact that the raw wilderness that Europeans thought they saw in their first New World encounters had already been actively shaped by Native Americans. Or, to take a more contemporary example, we might consider the ways in which efforts at wilderness preservation and restoration today are, in themselves, practices that produce the material reality of "wilderness" for us; we might think that, is about the labor and consumption involved in creating, maintaining, and experiencing a space nominally defined by the absence of labor and consumption. In this sense, even wilderness is part of the Heideggerian category of the standing-reserve, nature as answerable to human need (the need here being the feeling of escape from economy). In the case of more quotidian natural spaces such as farms, woods, parks, and so on, the role of human labor is more clearly evident, but even here we sometimes forget about it, unless the laborers themselves are present to remind us as they did Emerson.

The complicated questions of human agency and social relations recall Raymond Williams's critique of pastoral as a form of false consciousness. Williams finds the pastoral design to proceed from an ideological division of leisure from labor: in pastoral, nature as an object of beauty or site of bounty is screened off from the human activities of creating and maintaining that beauty or producing that bounty. He develops this assessment of pastoral through an implicit appeal to its classical differentiation from georgic. Thus the modern georgic, as in the works of agriculturalist and social critic William Cobbett, for example, suggests for Williams the possibilities of a progressive ideology. Yet even here there are complications, particularly in two of georgic's key terms, cultivation and improvement. As Cobbett's observations are taken up by novelists such as Jane Austen or George Eliot, they are subjected to the screening process of pastoral. "The working improvement, which is not seen at all, is the means to [the] social improvement" desired by the novelists' characters. Williams's critique of pastoral, then, stresses the importance of contextual analysis. Buell also stresses contextual analysis as he argues (against Williams) that pastoral topoi such as the "retreat" to nature are ideologically indeterminate of themselves but can, "depending on context," be "counterinstitutional" or "institutionally sponsored".

The question of ideological valence returns us to the second of the issues raised by Buell's definition, the specificity of the ethoi of "rurality or nature or wilderness" celebrated by pastoral. Attending to the function of human agency in its engagements with nature and to the historical variability of the ethoi according to which such engagements are assessed complicates any modal definition of pastoral, making provision room for georgic, as I am using the term here, as a useful category. Georigic, in this sense, treats those aspects of pastoral, broadly construed, that concern not the retreat to nature or the separation of the country from the city, but our cultural engagement with the whole environment. As Buell argues, "the promise of pastoral aesthetics as a stimulus to ecocentrism can fulfill itself completely only when pastoral aesthetics overcomes its instinctive reluctance to face head-on the practical obstacles to the green utopia it seeks to realize. Only then can it mature as social critique." Recovering the georgic tradition of environmental writing can help guide this maturation process. For example, this tradition bridges the gap between what Donald Worster has identified as the two major schools of environmental thought, the arcadian and imperial stances toward nature. According to Worster, proponents of the former stance, such as Gilbert White and Thoreau, advocate the "peaceful coexistence" of human beings with other organisms, while proponents of the latter, such as Francis Bacon or Linnaeus, advocate humankind's "dominion over nature." In the classical distinction I have reprised here, it may seem that on Worster's terms, georigic would line up with the "imperial" stance. Yet I will argue that any such conceptual alignment breaks down when we think about the category of labor, for here "peaceful coexistence" cannot mean mere passivity. As even the arcadian Thoreau recognized, we must labor to produce our lives. We can do so in a variety of ways, and this is what the American georgic attempts to work out. And more than this: at its most sophisticated, the georigic addresses the fundamental questions underlying Worster's dichotomy: what is the relationship between humankind and the rest of nature? What ought it be?

There are, to return to Alpers, many anecdotes, more or less representative under different circumstances. There are many stories of American nature, procuring from different assumptions about the environment and peoples' place in it. Tracing one kind of story in particular, this study assumes that a full understanding of the struggle to define the basic terms of the human relationship to the natural environment must include an understanding of the transformations of that environment which are necessary to produce human life and culture. From Sir Thomas More's ac-
count of Utopian colonization practices, through George Perkins Marsh's warning about the long-term effects of deforestation, to the current paradigm of steady-state or sustainable economics, this understanding has always been directed toward the future, and thus at least implicitly toward questions of environmental capacities and limits.

Although the term agrarian might suggest itself as encapsulating the social, political, and economic analysis of environmental engagement that I am advocating here, I would like to reserve the term georgic in light of agrarianism's identification with a specific ideology or program, for I am concerned precisely with debates over ideologies and programs. Of course agrarianism has featured prominently in these debates. In his now classic study of the topic, Henry Nash Smith took a mimetic approach to rural literature, arguing that prior to Hamlin Garland, American writers, overly committed to genteel romance or adventure story, could not find a literary form adequate to represent the agrarian ideal.16 This ideal—a cultural symbology of a classless, democratic, fee-simple empire of yeomen farmers—Smith assumed (despite his critique of Frederick Jackson Turner) was embodied in the actual experience of the agricultural West. Earlier writers, however, had significantly different conceptions of the public good than did those later nineteenth-century agrarians. Moreover (to anticipate Chapters 5 and 6 of the present book) as something like Smith's conception of the agrarian ideal began to emerge in the late eighteenth century, it was fraught with conflict over the organization and disposition of rural labor. This conflict may, in fact, partly account for the failure of literary form that Smith traces prior to the inception of rural realism.

I do not claim to offer a comprehensive history of the American georgic's ideological contestations here, but only to visit several important moments and texts, tracing some significant lines in the development of American environmental consciousness. I begin by identifying the origin of the mode in the sixteenth-century English recognition of a general, systemic relationship between the human economy and the natural environment, a recognition that was significantly catalyzed by the European discovery of America. As William Spengemann demonstrates, this discovery required Europe not only to recognize the existence of something new in the world, but beyond that "to reconceive the fundamental idea of the world itself—its geographical form and symbolic meaning, and the role of human activity in the determination of these things."17 For early promotional writers such as the elder and younger Richard Hakluyts, this reconceptualization meant theorizing economics anew in relation to environmental capacities. These writers began to define the English nation as an economy and to understand that nation-economy as a system. They argued that the well-being of the realm depended on opening this system to New World environments and, in some respects, closing it off from other Old World economic systems. Speculating on expansion, boundaries, and limits, they transformed the existing economic vocabulary of "commodity," "waste," and "vent" in relation to this newly recognized environmental context. Such considerations invite us to read early promotional literature's generic focus on the relation between economy and environment in terms of the recent interdisciplinary insights of sustainable economic theory.

Although, as I observe in the conclusion to Chapter 1, the trajectories of modern economic and environmental thought began to diverge soon after the sixteenth-century promoters' initial theoretical insights, fully to reconverge again only recently, these strands remained interwoven in the American georgic tradition. This tradition from its inception, following the promotional texts of the Hakluyts and their cohort, had the same ultimate goal as that of modern sustainable economics: to articulate a relationship between economy and environment that would foster the public good. Different contexts shaped different determinations of the public good, while local concerns sometimes submerged aspects of the systems-theory perspective articulated by the first promoters. Chapter 2 begins by observing that where the Hakluyts had divided the Old from New Worlds and had identified them respectively as the conceptual loci of economy and environment, with colonial trading posts as boundaries or vents mediating between the two, the first generation of Virginia colonists found that this theoretical division could not correspond neatly with any spatial division, even if the vast ocean separating America from England encouraged such a conceptualization. To colonize in search of new input and output capacities was to bring the English economy to America and thus to translate all concerns about capacities and boundaries to that ground. Thus the True Declaration of the Estate of the Colonie in Virginia (1610), for example, conceptualized the mediation between the two realms as on-site exchange and identified the medium of exchange as labor. In his Generall Historie (1624), John Smith accepted this position but gave a more considered discussion of how labor ought to be ordered, based on a more thorough environmental observation. Despite his current status in the literary canon as an originary spokesman for the American virtue of free enterprise, Smith was acutely aware of the difficulties of proper management posed by an emergent capitalist system, in which "the desire of present gaine (in many) is so violent, and the endeavors of many undertakers so negligent, every one so regarding their private gaine, that it is hard to effect any publicke good."18 Some of his specific suggestions, such as the implementation of governmental price supports for grain crops, seem intriguingly modern. In general, Smith attempted to balance the concerns of centralized economic-environmental management and the
individual production of wealth—a balance that we have not yet managed
to strike.

Like the first-generation Virginians, first-generation New England colo-
nists recognized that America could no longer be thought of in terms of
the Hakluyts’ imagination of the colonization project, as a mere bound-
ary and transfer point between economy and environment. Rather, they
understood colonial New England itself as an economic system requiring
environmental inputs and producing of itself certain excesses. Chapter 3
considers Edward Johnson’s and William Bradford’s evaluations of land
use in terms of the public good as representing, respectively, optimistic
and pessimistic attitudes toward economic growth. The views of both,
however, proceeded from the nostalgia at the heart of Puritan religious
primitivism, a nostalgia that radiated outward to economic and environ-
mental concerns. Johnson, unable fully to align the social and religious
consequences of the Bay colony’s rapid economic development with the
primitivist ideals of Puritanism, finally advanced a millennialist historiog-
raphy. Bradford, more fully able to recognize the conflict, drew up short
of any such eschatological theorizing. Yet any resolution to the contra-
diction that troubled both of their histories—the conflict between the
ideals (both still current today) of social cohesion and unlimited free-
market growth through ever increasing engagement with environmental
capacities—remained inconceivable within historical time and space.

A different sort of nostalgia inflects Robert Beverley’s History and Present
State of Virginia. Chapter 4 argues that Beverley, more willing than the
Puritans to entertain the possibilities of a material environment’s em-
bodying a Golden Age, elaborated John Smith’s critique of Virginia’s to-
bacco monoculture, based on a comparison of economic-environmental
relations before and after colonization. Beverley registered contempo-
rary economic dissatisfactions by mapping a Native American culture’s
apparently harmonious relation to the environment, which had been
interrupted by colonization, onto Golden Age mythography. Rather than
mourning the loss of paradise, however, he turned to the classical geor-
gic’s calculus of compensation, according to which improvement could
stand in for such loss. Virginia, he found, offered a double prospect
for improvement: the environment would benefit familiar English culti-
vars, while cultivation would develop native species to yield useful prod-
ucts. Two factors, however, vitiated against any such program for im-
provement. The tobacco economy was structurally predisposed against
diversification. Moreover, that economy, despite (or because of) its stagn-
ation in the latter part of the seventeenth century, had enabled the con-
solidation of the gentry class, the primary audience for Beverley’s pro-
gram. This class was in the process of developing a pastoral orientation
to the environment, traces of which begin to emerge in Beverley’s text.

Although the pastoral moments in the History generally bear a georgic
inflection that criticizes pastoral’s lack of economic consciousness, the
colonists’ increasing dependence on unfree labor cut against any rad-
cial potential of Beverley’s program for environmental-economic trans-
formation.

Chapter 5 goes on to examine the ways in which the assessment of
economic-environmental engagement that had preoccupied American
georgic writers in various local contexts through the seventeenth and
early eighteenth centuries coalesced in a discourse of national scope.
America thought of itself as a nation of farmers. Yet even bracketing the
question of slavery, Americans did not agree about the nature of agri-
culture itself. Farming was not a single, uniform activity, but rather in-
cluded diverse and conflicting practices, complicated in both class struc-
ture and environmental orientation. Contemporary recognition of these
complications led to an assessment of the merits of two general methods,
characterized respectively by seminomadic or “backwoods,” subsistence-
oriented practices or by sedentary, intensive, market-oriented practices.
Participants in this assessment included Hector St. John de Crèvecoeur,
Thomas Jefferson, and Benjamin Rush, as well as authors of various
agricultural treatises. To address conflicts over farming practices in the
late eighteenth and early nineteenth centuries, the literature of agricul-
tural improvement developed a discourse of rural virtue that linked
economic-environmental intensification to national stability. This dis-
course excluded the “backwoods” voice, partly through the fact of its dis-
semination in print culture, to which those practitioners of nonintensive
agriculture had little access. Although it was satirized by Charles Brock-
den Brown, it set the terms on which future debates over resource use
would be conducted.

Chapter 6 examines one of the most volatile of these debates in the
antebellum era, over the economic-environmental activity of America’s
indigenous peoples. In the dominant white American assessment, Native
Americans were, on the one hand, characterized as savages whose land
was not cultivated, not “improved,” and thus could not ground American
political virtue. On the other hand, the virtue of the rural was extended
to them in arguments that they ought to be removed westward, where
they and the land could simultaneously be cultivated. One indigenous
nation, however, coopted the terms of the discourse of rural virtue to
argue against removal from their homeland. Drawing on georgic topoi
familiar to whites, but which had roots in their own agricultural tradition
as well, Cherokees such as Elias Boudinot and David Brown developed
a counternarrative of “improvement,” recontextualizing and reorienting
the georgic’s concerns so as to critique both the white image of Indian
“savagism” and the idealization of the rural, middle landscape as white.
property. The Cherokees invoked the radical potential of the American georgic, demonstrating that it was possible to develop an agrarian economy and sustain sociopolitical cohesion by defining their resource base as a national, rather than a set of individual possessions. Although it succeeded aesthetically, the Cherokee georgic failed politically. Its aesthetic success may even have been politically counterproductive, as white Georgians eyed greedily the beautiful, fertile agricultural environment that the Cherokees showed they had made. The struggle over rights to Cherokee lands thus clarified the American georgic mode's primary theoretical project and revealed its political limitations within the antebellum context.

While the Cherokees were arguing that their mode of economic engagement with the environment was good and just, even according to the dominant white terms of valuation, James Fenimore Cooper projected through the figure of the Indian a desire to escape from economy altogether. In The Pioneers, Cooper set before his American readership an environmental debate which both pitted wilderness values against settler culture and analyzed the complexities of economic-environmental engagement within the terms of that culture. The concluding chapter of this study follows that debate from Cooper to the later writings of Thoreau and George Perkins Marsh. Although Cooper could not resolve the larger conflict he posited between economy and its other, the wilderness, his study of the social ecology of the Templeton settlement stressed the importance of environmental knowledge. In this way, his local investigation anticipated Marsh's global investigations. Refusing the illusory escape from economy held out by Cooper, Marsh posited that labor is the one universal constant in humankind's engagement with the environment. Like the Hakluyts almost three centuries before, he promoted a systemic perspective, analyzing the economy's dependence on the environment and the environment's limits on carrying capacities. Beyond this, he recognized that the history of the georgic raised a closely related philosophical question, "whether man is of nature or above her." In asking this question, Marsh made explicit the georgic tradition's conceptual separation of humankind from the rest of nature, clarifying the tradition's assumptions of moral obligation to both the environment itself and the future of humankind—the largest sense of the public good. Marsh's moral discourse thus confronted head-on the problem that all georgic writers up to this time had considered and that the Cherokee case had laid bare: the question of agency. Cooper had raised this issue only to let it drop. The Cherokees, whose political structure suggested the possibilities of national rather than individual agency, had been disempowered. Thoreau addressed the question locally in his late work on forest succession, which he recognized held significant implications for land manage-
Chapter 7
"Co-Workers with Nature"
Cooper, Thoreau, and Marsh

Why not control our own woods and destiny more?
Thoreau, "The Dispersion of Seeds"

For Americans unfamiliar with the Cherokee georgic, Removal could be written off as yet one more instance of the inevitable disappearance of a primitive mode of life. Robert Beverley had much earlier described a loss of "Native Pleasures" resulting from colonization and had proposed a calculus of compensation in which a georgic society, through diversified economic engagement with the natural environment uniting beauty and use, might hope to repair the loss. Differing valuations of this loss are registered in our literature as early as the conflict between Thomas Morton and the Plymouth colonists. In New English Canaan (1637), Morton found the Indians to embody a native civility lost to the English, whereas William Bradford saw Morton and his Indian crew forsaking good work and good order for mere pleasure, idleness, and disruption. Late colonial and Federal-era agrarian writers found such "Indian" traits to characterize white backwoods farmers as well, who were supposed to have lacked the industry to produce at market levels. These writers followed Edward Johnson in celebrating increasing market embeddedness as the foundation of sociopolitical stability and the public good. Yet the image of the "Indian" persisted as a means of registering dissatisfactions with the results of particular economic engagements with the environment (dissatisfactions that today are registered for example in our appreciation of wilderness as a place of escape and recreation). In the antebellum era, an important locus of this appeal to the primitive was James Fenimore Cooper's Leather-Stocking Tales, which gave "Indian" values a white spokesman in Natty Bumppo, thus bringing them respectably into dominant American discourses. While the Cherokees were strategically arguing that in certain respects they were "white," Cooper imagined translating an "Indian" relationship to the environment into white terms,
thus finding a positive valuation where William Gilmore Simms, for example, found a negative one.1

In the first of the Leather-Stocking Tales, *The Pioneers* (1823), Cooper set up an environmental debate, attacking various positions to various characters. Readers could identify (or not) with Judge Temple, the proto-conservatist who lacks environmental knowledge; the laborer Billy Kirby or the scientific improver Richard Jones, who would, in different ways, thoughtlessly exploit natural resources; or the white Indian Natty Bumpo, who speaks for the wilderness.2 The judge’s daughter, Elizabeth, gives yet another perspective, the one perhaps most familiar to Cooper’s genteel Eastern readership. Elizabeth shows a fine appreciation of landscape aesthetics, but little understanding of the relationship between the form of a landscape and its capacity to sustain human life and culture, as she interrupts her father’s account of the early “starving-time” to ask, “But... was there actual suffering? where were the beautiful and fertile vales of the Mohawk? could they not furnish food for your wants?”3 Through the interaction of these characters, Cooper took it upon himself to educate such a readership in the relationship of economy to environment.4

The environmental debate in *The Pioneers* goes in two directions. On the one hand, Cooper imagines the possibility of an escape from economy altogether in the figure of Natty, who—if we do not look too closely at the fact that he gains his livelihood as a market hunter—seems to embody a nonexploitative relationship to the natural environment. On the other hand, within the terms of the settlement economy, Cooper addresses issues of law, property, and practical environmental management. In presenting this debate, he evokes the systems-theory approach to the relationship between economy and environment first envisioned by the Hakluyts and their cohort. Cooper fears that expansion will force the economy up against its environmental limits in America, anticipating a reiteration of the entropic scenario that the Hakluyts’ program of colonization had attempted to prevent for England. Eventually, Cooper says, “the evil day must arrive, when their possessions shall become unequal to their wants” (16). Against that day, he investigates the social ecology of the settlements, hoping to derive its compatibility with nature. His inability to resolve the debate he poses is nowhere more strongly evident than in the hollow sound of the novel’s last sentence, where we suddenly find Natty’s values accommodated to those of the settler culture: “He had gone far towards the setting sun,—the foremost in that band of Pioneers, who are opening the way for the march of the nation across the continent” (456).

In *Man and Nature* (1864), George Perkins Marsh unpacks the contradiction underlying the doubly directed environmental debate in *The Pioneers*. Cooper had posited nature as the source of all value and had criticized the settler culture’s incompatibility with that value, even as he wanted to value settler culture positively in its own right. Where Cooper imagined a hypothetical compatibility with nature in the solitary “Indian” mode of environmental engagement represented by Natty, Marsh locates the question of compatibility on a deeper level, in the origins of human identity as such. He argues that “the earth was not, in its natural condition, completely adapted to the use of man” but rather inevitably requires certain interventions to support human life.5 Where Cooper imagined Natty as offering an escape from economy (even if he is ultimately recontained by it), Marsh proposes a resolution that depends on importing the category of economy to conceptualize nature itself and our relation to it, thus anticipating modern sustainable economic theory. It is a matter of getting human systems, which can be altered, to match environmental systems, which cannot. Thus Marsh reaches back through the history of the American georgic tradition to an idea formulated in the 1610 *True Declaration of Virginia*, “God selvs vs all things for our labour.”6 He sees that the exchange relation has been unequal in practice, leading to the drawing down of nature’s value: nature cannot repay human labor with the “incredible vsurie” the Declaration had imagined.7 The use of input and output capacities had proceeded to the point where they might soon become insufficient to support human life. Exceeding this point would result in environmental apocalypse.8 Marsh’s return to the entropic scenario described by the Hakluyts and their cohort thus gives that scenario a global scope, encompassing the whole of the human species. As the reversal of entropy in any system is possible only through importing some capacity for work, Marsh envisions a restoration of nature’s value through the same agency that had diminished it: human labor. He argues that we must become “co-worker[s] with nature in the reconstruction of its damaged fabric” (35). Marsh’s global program bears comparison here with the local program developed by Thoreau in his late work on forest succession, in which he urges Concord farmers to cooperate with the “steady and consistent endeavor of Nature” to manage their woodlots.9 The beneficiary of the cooperative labor envisioned by Marsh and Thoreau is not, as it had been for the Jamestown company, the private individual so much as the environment itself and its capacity to sustain human life into the future.

In thus developing a critical perspective on the American georgic tradition from within, Marsh necessarily investigates the fundamental relationship between humankind and nature—the terms, as my epigraph from Thoreau puts it, of “our destiny.” Marsh asks “the great question, whether man is of nature or above her” (465). Philosophical accounts outside the georgic tradition have often addressed the question of our
relation to nature through the category of perception. Yet so long as our focus remains perceptual, what we actually do in the world and how we do it may remain secondary issues. Marsh instead approaches this fundamentally human question of being through the category of labor—the history of what we have done in the world and how we have done it—to make recommendations regarding practices. This approach in turn opens onto larger questions of agency, the organization of these human practices. Through what structures, Marsh asks, can we implement ecological knowledge, be it gained through scientific study or through “the common observation of unschooled men” (such as Natty Bumppo and Billy Kirby), so as to foster the public good now and for the future (52)? This is the motivating question of the American georgic—one that we are still asking today, but too often without recalling the georgic’s most important insight, that labor is life.
instrumental argument against the destruction of the South American rainforest today: some of the woodland plants "are known to possess valuable medicinal properties, and experiment may show that the number of these is greater than we now suppose"; therefore, they must be preserved for the health of future generations (248). Yet beyond this, Marsh continues,

He whose sympathies with nature have taught him to feel that there is a fellowship between all God's creatures; to love the brilliant one better than the dull ingot, iodic silver and crystallized red copper better than the shellings and pennies forged from them by the coiner's cunning; a venerable oak tree better than the brandy cask whose staves are split out from its heart wood; a bed of anemones, hepaticas, or wood violets than the leeks or onions which he may grow on the soil they have enriched and in the air they made fragrant—he who has enjoyed that special training of the heart and intellect which can be acquired only in the unviolated sanctuaries of nature, "where man is distant, but God is near"—will not rashly assert his right to extirpate a tribe of harmless vegetables, barely because their products neither tickle his palate nor fill his pocket; and his regret at the dwindling area of the forest solitude will be augmented by the reflection that the nursetlings of the woodland perish with the pines, the oaks, and the beeches that sheltered them. (248-49)

Preservation thus manifests desirable human qualities such as humility, forebearance, nurturance, and a love of beauty. In turn, preservation provides opportunities to foster our self-reflective development of such qualities, to cultivate "sympathies." This cultivation is often manifested in our habit of projecting these qualities back again onto nature, and some of these very qualities (the understory plants are said to be the trees' "nursetlings") have instrumental implications for the continuance of future generations. Moral and instrumental perspectives thus resonate with each other, their harmony indicating humankind's proper relation to the material environment in practice: we ought to "become . . . co-worker[s] with nature in the reconstruction of the damaged fabric which the negligence or the wantonness of former lodgers has rendered untenantable," and in the maintenance of that fabric once repaired (35).

Our Woods and Our Destiny

In this respect at least, Marsh's position is not so very different from that of his now more famous New England contemporary, Thoreau. In "The Dispersion of Seeds," a manuscript unfinished at his death in 1862, Thoreau addresses at a local level the sort of cooperative action that Marsh envisions on a global scale. This essay, which begins as an investigation into the natural propagation of plants, ends with a discussion of land management. The turn to management occurs at the point in the text where Thoreau announces his discovery of forest succession, a phenomenon that came to Marsh's attention via the European literature that began to be published in the 1840s. Thoreau, evidently the first American to identify the phenomenon, concludes that if we "attended more closely to the history of our woodlots," working in concert with the predictable regularity of succession, "we should manage them more wisely." In one of many instances, he notes how "eight or ten years at least had been gained" by the judicious cutting of a particular pitch-pine woods to favor the succeeding white pines, which resulted in "a valuable woodland"; yet he finds that this technique was practiced in only "three out of the thirteen cases" he has observed in Concord (153). Instead, too often "the history of a woodlot is . . . a history of cross-purposes" (170). For example, he visits a "dense white-pine wood" that had been logged the previous winter, expecting to find the oak seedlings he knew must succeed the pines, given the recent fertility of oaks in the vicinity. He discovers instead that the landowner "has burned it all over and sowed winter rye there!" (172). The owner "no doubt means to let it grow up again in a year or two" to oaks, "but he thought it would be clear gain if he could extract a little rye from it in the meanwhile" (172-73). But in so doing, the landowner prevented nature from "pursuing] the way she had entered upon." Thus the oak seedlings have been wasted and the land no longer has large pines to attract the squirrels that bury the acorns that enable the oak succession. If the owner continues even a year or two in extirpating oak seedlings and planting rye, "oaks cannot spring up here, for they must be preceded by pines. Pines and birches may, however, if there are seeds ready to be blown hither; but it may take a long while, and moreover the land is 'pine-sick.'" Such "greediness that defeats its own ends," Thoreau argues, ought to be prohibited: "So he trifles with Nature. I am chagrined for him. That he should call himself an agriculturalist! He needs to have a guardian placed over him .... Forest wardens should be appointed by the town—overseers of poor husbandmen" (173). So ends "The Dispersion of Seeds" with a call for regulation that Cooper's Judge Temple might well have approved, had he Thoreau's understanding of environmental history. Such regulation would enforce the principle of cooperation with natural processes that Thoreau and Marsh both urged.

Thoreau, of course, was interested in wild as well as managed woodlands, for "in Wildness is the preservation of the World." Yet it is interesting to note that following this often-quoted passage from the late essay "Walking," Thoreau remarks particularly on our economic dependence on the wild, a point that is fundamental to Marsh's study. Moving from a description of nature's processes to a meditation on our cultural engagement with its products, Thoreau observes that "every tree sends its fibres forth in search of the Wild. The cities import it at any price. Men plow
and sail for it. From the forest and wilderness come the tonics and barks which brace mankind” (224). The wild he finds embodied in the West: “the future lies that way to me, and the earth seems more unexhausted and richer on that side” (217). He needs to imagine the West as limitless, the perpetual “home of the younger sons,” a continual source of moral as well as economic value (223). Appealing to the stadialist theory of settlement that was used to legitimate the removal of the Cherokees and other indigenous peoples, he claims that “the farmer displaces the Indian even because he redeems the meadow, and so makes himself stronger and in some respects more natural,” as well as producing his material livelihood from it (230). As we have seen, Marsh in effect closed off this idea of the West as infinite environmental capacity.

Thus I do not want to suggest that Thoreau and Marsh held identical positions. Marsh reacted more strongly than did Thoreau to the global history of environmental degradation, partly because Thoreau was often reluctant to imagine the vulnerability of the pastoral spaces he valued. Marsh’s observations led him to argue strenuously for the efficacy and necessity of human action to repair degradation and develop sustainable economic-environmental engagements. He did not, however, go so far in the direction of managerialism as did another New Englander similarly alarmed at deforestation, George B. Emerson. In his Report on the Trees and Shrubs Growing Naturally in the Forests of Massachusetts (1846), Emerson insisted that no land whatever, “except the ocean beach, should be considered unimprovable”; thus “almost every acre of the surface [of Massachusetts] might be made productive” in some way. Addressing “utilitarian readers,” he even apologized for including some brief passages on “the beauty of our native trees,” arguing that such passages may induce the more aesthetically minded to plant trees (vii). Primarily, however, he viewed trees as “crops,” which ought to be rotated as “in cultivated fields” (19).

For Marsh, management did not necessarily mean intervention. Sometimes it meant letting things alone. For example, he criticized the draining of wetlands along rivers, which often results in increased flooding and other detrimental effects (310). Marsh objected to irrigation, finding nonirrigated crops “superior in flavor and in nutritive power” and noting a number of evils including salinification of the soil and “prejudicial climatic effects” (321, 328). He went so far as to suggest that the discontinuation of irrigation in Egypt would eventually lead to the reforestation of the Nile region (317). In the case of forests, considerations of “immense collateral advantages” such as effects on climate and soil were sufficient evidence of value beyond any more immediate economic input that might be derived from them (279). He believed that in some cases, particularly in Europe where population density is great and woodland acreage comparatively small, “the sooner a natural wood is brought into the state of an artificially regulated one, the better it is for all the multiplied interests which depend on the wise administration of this branch of public economy” (260). In America, however, where great tracts of “primitive woodland” abound, he argued as well for preservation:

It is desirable that some large and easily accessible region of American soil should remain, as far as possible, in its primitive condition, at once a museum for the instruction of the student, a garden for the recreation of the nature lover, and an asylum where the indigenous tree, and humble plant that loves the shade, and fish and fowl and four-footed beast, may dwell and perpetuate their kind, in the enjoyment of such imperfect protection as the laws of a people jealous of restraint can afford them. (203-4)

Thoreau’s argument for forest preservation in The Maine Woods addresses many of the same issues, invoking a perhaps deeper sense of “re-creation” but similarly imagining large tracts as a sort of historical repository:

The kings of England formerly had their forests “to hold the king’s game,” for sport or food, sometimes destroying villages to create or extend them; and I think that they were impelled by a true instinct. Why should not we, who have renounced the king’s authority, have our national preserves, where no villages need be destroyed, in which the bear and the panther, and some even of the hunter race, may still exist, and not be “civilized off the face of the earth”—our forests, not to hold the king’s game merely, but to hold and preserve the king himself also, the lord of creation,—not for idle sport or food, but for inspiration and our own true re-creation? or shall we, like villains, grub them all up, poaching on our own national domains? 42

But who is this “we” who might destroy or preserve such woodlands? Thoreau’s evocation of contrasting modes of political authority—tyranny versus its renunciation—indicates that this is the key question. How could that “true instinct” of the English monarchs become embodied in American practices, especially since, as Marsh noted, Americans are “a people jealous of restraint” (few more so than Thoreau himself)? 43

Most important, then, Marsh and Thoreau share common ground in asking the question of agency. This question, we have seen, was asked in one form or another by most of the georgics we have examined, from John Smith’s concern over the dispersal of settlement at Jamestown and the consequent evacuation of the colony’s moral authority through the Cherokees’ national concern to retain their homeland and continue their particular mode of agricultural practice free from the intervention of the United States. As Thoreau asked the question, who would have the authority to compel the untutored farmer to manage his woodlot in cooperation with nature, or to compel the American people to set aside large tracts for preservation? The local economy of Concord might con-
ceivably admit the appointment of forest wardens, but in the social ecology of the world at large, the necessity of foresight runs up against considerations of practice, property, and agency. If we ought to become co-workers with nature, how can we make sure that our labor is properly directed and genuinely cooperative?

Although Marsh does not develop a consistent answer to these questions, he addresses them more extensively than anyone had to this point. Consistency would elude him so long as he held to fundamental capitalist assumptions regarding property rights. These assumptions finally prevent him from imagining a structure of policy-making that could enact the programs of restoration, conservation, and preservation that were the logical end of his study of social ecology. Even so, we can see him struggling against the institutional fact of property at times, as for example in his vehement critique of the railroads, “joint-stock companies” that “have no souls” and “their managers, in general, no consciences.” All such “private associations” have the legal capacity of agency but not of responsibility to the public good, being endowed with no “higher obligations than those of a pecuniary nature” (5). Marsh thought that governments, which were capable of “look[ing] to more distant as well as nobler ends” than were “private enterprises,” thus ought to take responsibility for any large developmental or restorational project (456). “In countries where there exist municipalities endowed with an intelligent public spirit,” municipal ownership of forests “would often prove advantageous”; yet while “forest communes” have succeeded, as for example in Lombardy, they have also failed, as in Switzerland where pasturage has so degraded the forest lands that there is “nothing left that is worth protecting” (202, 203).

Regarding America, Marsh suggests that “the State should declare the remaining forest the inalienable property of the commonwealth,” set some aside for preservation as wilderness, and manage the rest for productive uses (203).

Despite his qualified hopes for government regulation, Marsh admits that “no legislation can secure the permanence of the forest in private hands” (250). American liberal individualism, manifested in land ownership, runs too deep. Thus Marsh counts finally on owners themselves to have “a strong interest in the protection of their domain against deterioration” (46). He concludes that “for prevention of the evils upon which I have so long dwelt, the American people must look to the diffusion of general intelligence on this subject, and to the enlightened self-interest, for which they are remarkable, not to the action of their local or general legislatures” (259). Marsh hoped that his book would contribute to this program of enlightenment, especially since he wrote not for scientists but rather for a general readership of “educated, observing, and thinking men” (5). Such self-interest, however, even if enlightened, is not necessarily coextensive with the sense of moral obligation to the human future that Marsh attempts elsewhere to inculcate, as for example in his assertion that “the planter of a wood must be actuated by higher motives than those of an investment the profits of which consist in direct pecuniary gain to himself or even to his posterity” (278, emphasis added). Marsh saw that the fundamental categories of economy can be organized in various ways and do not depend theoretically on the category of individual property in land (as for example the Cherokees’ land system did not), but he hoped that in practice the conventional American structure of individual property might act as a check on the actions of corporations, agents that routinely ignore all “higher obligations” (51). Any such obligations or motives by which labor might be reconceptualized for environmental good supplement but do not supplant the basic structure of individual self-interest that Marsh assumes.

Man and Nature significantly influenced government policy, but as reviews of the first two editions indicate, it did less to enlighten the individual property owners whom Marsh considered his primary audience. The book led Congress to establish a national forestry commission and national forest reserves in 1873. Citing these congressional actions, Scribner’s characterized Marsh’s “point of view” as “that of a law-maker or advocate of internal improvements,” but said little of private citizens except in the roles of “teacher” and “voter.” Reviewers heeded Marsh’s warnings of impending environmental apocalypse to a greater or lesser degree, but only rarely did they point his conclusions toward individual action. The Christian Examiner, to which Marsh sometimes contributed, took its review of the first edition as an opportunity to criticize contemporary assumptions of an “unlimited future of progress,” noting that Marsh “hint[s] that the race has very nearly reached the meridian of its terrestrial day . . . that, unless something can be done to stay the waste or restore the loss, the material conditions of our civilization, of social progress, perhaps even of human life and society itself upon our planet, are already slipping from our hands.” The means by which something might be done, however, remain vague to this reviewer, encompassed only in the general observation that “our personal and political economies should conform” to the “grand economies of nature.” The Edinburgh Review, in contrast, saw no reason to address the question of agency at all, but rather criticized Marsh for excessive “zeal,” discounting his claims about climate and erosion as overgeneralized. This reviewer regarded woodlands primarily as sources of fuel, which might be replaced by coal; coal deposits in turn might eventually be exhausted, but at such a distant point in the future that it was “useless to speculate . . . on the general condition of mankind at [that] time.” The scientific journal Nature was similarly reserved, suggesting that, “viewed broadly,” humankind’s “interferences with the
ordinary economy of nature . . . cannot do more than alter the balance of [natural] forces, giving to some a greater and to others a less share of work than in a natural state would be accomplished by them." 50 James Russell Lowell most nearly approached the spirit of Marsh's moral discourse, arguing that the book leads us "to reflect upon the rights and duties of government, as preventive and advisory, and to feel that there is a common interest which vastly transcends the claims of individual freedom of action" in our engagements with nature. 51 Only one review of the six I have located, however, took up any specific recommendation regarding land management practices. The Nation concluded that "the agriculturalist, as being in closest contact with nature, will perhaps derive the most profit from these pages." The farmers "on our Western plains" in "Minnesota or Kansas" ought to plant trees, not so much to alter the climate as to attract birds that would control grain-destroying insects. 52 Such a practice would, if carried out on a large enough scale, have the long-term effect of increasing the overall global ratio of woodland to tillage as Marsh recommended. The Nation did not, however, address the sense of moral obligation particularly noted by Lowell, which Marsh believed ought to ground any consideration of land practices. The gap between the systems-theory perspective that governs the analysis and the realm of individual behavior (think globally, act locally) finally proved too large for Marsh's moral discourse to bridge.

* * *

Like earlier writers in the American georgic tradition, Marsh develops a critical history of environmental engagement to urge us to action or restraint, as the situation requires. Like them, he employs rhetorics of excoriation, exhortation, and promise. Yet the promise of the environment seems more distant in Man and Nature than it did in the texts of the Hakluyts, John Smith, Edward Johnson, Robert Beverley, the Federal-era agrarians, the pre-Removal Cherokees, or in Thoreau's remarks on our wester-jng dependence on environmental capacities running up against its ultimate, global limits. The solutions he proposes to environmental crisis—government regulation, individual self-regulation, and recognition of our obligation to future generations—have at best been regarded as good ideas but not practiced. Perhaps it has been easier to imagine ourselves with Natty Bumppo, escaping to a frontier space, than to confront the fact of limits. When Marsh dispels this illusion of escape, we are left facing the historical contradiction registered in one of the earliest texts we have examined, Smith's Generall Historie. Describing the "benefit of libertie in the planters" arising from the first modest allotment of private holdings at Jamestown, Smith hoped that now "for the industrious, there is reward sufficient," more than mere "bread," in working the land. 53 Yet he soon came to recognize the difficulties of proper management in an emergent capitalist system, in which too often "the desire of present gaine (in many) is so violent, and the endeavours of many undertakers so negligent, every one so regarding their private gaine, that it is hard to effect any publike good." 54

Dismal as this assessment was, in some ways our present situation is worse, for our ability to understand our relation to the environment has diminished in certain respects since Smith wrote, even as science has given us the possibility of greater understanding. Our "private gaine" has become increasingly detached from the source of that "gaine," the nature from which we ultimately derive all life and culture. For one thing, the critical mass of individual property owners whom Marsh hoped to enlighten can hardly be said to exist today. The soulless "joint-stock companies" that Marsh excoriated possess a vast amount of resources, but even individual owners of productive land are bound up in corporate networks that have no "higher obligations" than profits to stockholders (51). The management of government lands for private profit (mining, timbering, grazing, and so on) further complicates the question. Exacerbating this general structure of environmental alienation is the fact that most Americans today experience nature primarily in the pastoral mode, regarding nature (if it is regarded at all) as a site of leisure, not of labor. Renewed attention to the American georgic tradition can illustrate the economics of even our pastoral experiences. It can also inspire us to think through the implications of our production and our consumption, no matter how alienated from their ultimate environmental basis. 55

In this sense, we are all potentially co-workers with nature. To begin working in concert, we might, for example, use the georgic tradition's insights to evaluate recent attempts to redirect our environmental engagements. One notable attempt, Paul Hawken's Ecology of Commerce (1993), assumes the Hakluyts' systemic perspective while appealing to the sense of moral obligation and the threat of environmental apocalypse deployed by Marsh. Hawken is more willing than Marsh to propose governmental intervention; for example, he recommends Pigovian taxes to encourage the development of a sustainable infrastructure. 56 But where we can see Marsh, at some moments, struggling against the constraints of property, Hawken's program still assumes, indeed depends on, capitalist relations of production. Even so, how his program might fare among "a people jealous of restraint" is open to question.

Further complicating the goal of economic cooperation with environmental processes is recent ecological research that criticizes the fundamental assumption of stability held by all the georgic writers examined
here. We are beginning to realize that nature does not exist in a state of equilibrium, even in the absence of human activity, nor does it tend to return to such a hypothetical state if disturbed. This new understanding of eternal dynamism may be disconcerting to environmentalists, for nature no longer seems to hold out a constant point of reference or ground for argument. Any formulation of programs directing our environmental engagements for the public good thus becomes increasingly problematic. These complications for a new georgic notwithstanding, one thing remains constant, and that is the necessity of labor itself. No matter how we understand nature, we produce our very being from it. As Marsh reminds us, labor is life.

Notes

Introduction

2. Gross's contextual studies of Thoreau's agriculture are suggestive in this regard. On the one hand Gross finds that, in contrast to the "interdependence and mutual cooperation" typical of eighteenth-century farming practices, Thoreau's individualism and rational systematization of life were "close in spirit to the advice of [nineteenth-century] agricultural reformers" ("Culture and Cultivation," 55). Yet Gross also argues that in his refusal to follow contemporarily recognized best practices—not manuring the field, hoeing the beans when they are wet thus enabling the spread of disease, and so on—Thoreau was spoofing those very reformers ("Great Bean Field Hoax"). See also Bromell, who argues that Thoreau reduced his labor to a theoretical minimum then amplified it again by suggesting that we love labor "for its own sake" (By the Sweat of the Brow, 218).
4. Donahue, Reclaiming the Commons, 8.
5. An important exception to this emphasis on the pastoral tradition is Tichi, New World, New Earth, which traces the "ideological imperative" of "environmental reform" evident in a millennialist strain of American literature from the Puritans through Walt Whitman (viii). Here Biblical rather than classical texts form the originary locus of an American landscape ideal. While my debt to Tichi is readily apparent in Chapter 3, I see millennialism (and its subsequent secularization) as but one interpretive matrix for understanding Americans' engagements with the environment.
8. We should note that history provides a very real counterforce to the rural scene of Virgil's Georgics as well. Book I ends on a plea for peace among images of armies on the march, fields abandoned, sickles beaten into swords—the destruction of agricultural productivity.
12. See, e.g., Krech, Ecological Indian.
13. Cronon, "Trouble with Wilderness," provides a useful overview of these issues.
emphasis on labor, and a rhetorical structure characterized by figures of blockage or indirection when the text addresses Europe and figures of openness or trade, see Rich and Mayer, State Economics: A New Approach, eds., 498–500.

Chapter 1. Economy and Environment in Sixteenth-Century Promotional Literature

1. Parrenius was a Hungarian scholar, educated at Oxford, whose connection to colonial ventures came by way of the younger Richard Hakluyt, with whom he shared rooms in Christ Church. Parrenius intended to write a full chronicle of the expedition, but, like Gilbert, was killed in a shipwreck on the voyage home. See Quinn and Cheshire, New Found Land. On Gilbert's ventures, see Andrews, Trade, Plunder, and Settlement, 183–99.

2. Quinn and Cheshire, 175. The translation is Hakluyt's and was first printed in the 1589 Principal Navigations.

3. Quinn and Cheshire, 175–76. Transcribing Parrenius's letter in the "Discourse of Western Planting," Hakluyt added a marginal note claiming that "afterwards they setted the woolds on fire with hunte the weke together" (Taylor, ed., Original Writings, 2:251), hereafter cited parenthetically as (O). As far as I am aware, there is no other record of this decision to burn the woods. Edward Hayes's account of Gilbert's voyage does not mention it; see Hakluyt, Principal Navigations, 6:1–38. Nor is it mentioned by Sir George Peckham, who interviewed Hayes on his return to England; see Peckham, True reporte on the late discoveries . . . by . . . Sir Humphrey Gilbert, in Quinn, ed., New American World, 3:55–60.


5. Hakluyt's translation expands Parrenius's noun, terebinthinus (of the terebinth tree, Pistacia terebinthus, not a conifer but a member of the sumac family native to the Mediterranean region) into these two commodities.

6. On sustainable economics, see Daly, Steady-State Economics; Daly, "Steady-State Economics: A New Paradigm"; Daly and Cobb, For the Common Good; Neumayer, Weak Versus Strong Sustainability.

7. Daly, "Steady-State," 811. The flow of solar energy into the ecosystem ultimately limits the flow of energy from the ecosystem into the economy. The ecosystem can absorb only a limited outflow of matter and energy—that is, waste—from the economy while sustaining human life; this limit is ultimately determined by the planet's capacity to transfer heat energy to space.

8. Both the promotional genre and the closely related voyage genre developed a fundamentally economic conception of nationhood, which competed with other conceptions projected by other cultural formations, such as the Crown, the gentry, the law, and the church. See Helgerson, Forms of Nationhood, especially 151–91. On the systematization of European economic thought from the mid-sixteenth century on, particularly in terms of the central principle of the balance of trade, see Rich and Wilson, eds., Cambridge Economic History, 4:498–500.

9. Generic conventions of the promotional tract include a utilitarian tone, an emphasis on labor, and a rhetorical structure characterized by figures of blockage or indirection when the text addresses Europe and figures of openness or expansive vision as it turns toward the New World. See Franklin, Discoverers, Explorers, Settlers, 87–94; Quinn, Explorers and Colonies, 106–7; Greene, Intellectual Construction of America, 34–45. Such figures persisted in later American promotions of westward expansion. Thomas Jefferson, for example, would argue that where land in Europe is "locked up against the cultivator," "we have an immensity of land courting the industry of the husbandman" (Notes on Virginia, 170). As late as the 1910s, promoters would use this rhetoric, now largely detached from economic theorization, to lure prospective homesteaders to eastern Montana; see Raban, Bad Land. While the model of colonial economies offered by the merchant promoters would become dominant, it was not the only one available in the sixteenth century. Gilbert's first voyage intended to establish a colony mainly as a pretense for capturing Spanish, Portuguese, and French shipping; see Andrews, Trade, Plunder, and Settlement, 187. Where Sir Walter Raleigh's Roanoke project was primarily mercantile, his later report on Guiana disdains trade in favor of conquest in order to establish military bases against Spain and exact tribute from the natives, for "where there is store of gold, it is in effect needless to remember other commodities for trade" (Raleigh, Selected Writings, 119).

10. According to the OED, the use of waste to refer to by-products of manufacturing processes did not develop until the eighteenth century.

11. Early texts such as these are rarely discussed in ecocritical contexts. Slovak, "Ecocriticism: Trajectories," gives a critique of ecocriticism's tendency to focus rather narrowly on the works of Thoreau and his heirs and related texts.

12. Recent ecocriticism values texts that move us from an anthropocentric to an eco- or biocentric world view; see, for example, Evernden, Beyond Ecology, Buell, however, demonstrates how difficult it is for even the most committed ecocentric to decenter human subjectivity; see Environmental Imagination, 143–79.

13. As Horwitz succinctly puts it, where the Aristotelian tradition viewed economics as a matter of "managing resources ready to hand," Locke's Second Treatise "redefined value as the product of human labor modifying nature" (By the Law of Nature, 7).


15. More, Utopia, 66–67 (emphasis added), hereafter cited parenthetically as (U). I quote from Ralph Robinson's 1551 translation (ed. Collins), in which More, of course, had no part, to present the topic in contemporary language.

16. Although the first official pronouncement on England's balance of trade came in 1381, the concept did not really catch on until the sixteenth century. Mercantilism was not fully recognized as an economic theory until it became an object of critique for the Physiocrats and Adam Smith; see Magnusson, Mercantilism, 9. Here I use "mercantilism" in the very general sense of the promotion of a favorable balance of trade.


19. More would have concluded from Vespucci that iron was not abundant in the New World. He probably also knew that the increasing demand for iron in England had to be met with imports. See More, Complete Works, 427.


sion against Georgia's extension of its state laws over the Cherokee territories, Boudinot and other prominent Cherokees such as John Ridge began to rethink their own positions on Removal. At that point, Boudinot wanted to open a debate on the issue in the *Phoenix* but the Council refused and Boudinot resigned. See Boudinot, *Cherokee Editor*, 162–75.

67. For details of this case, see McLoughlin, 440–44; Perdue and Green, *Cherokee Removal*, 83–75.


69. Figures are taken from Wilms, "Cherokee Indian Land Use," 60, 80, 136.


71. Wilms, 70.

72. Wilms, 60; White, 22–23.

73. Qtd. in Usner, "Iroquois Livelihood and Jeffersonian Agrarianism," 225.

74. Tenancy and wage labor were quite common among whites. In southern Appalachia in 1860, between 30 and 50 percent of households did not own land. See Duraway, *First Americans*, 75.

75. As Elias Boudinot noted in his letter resigning the editorship of the *Phoenix* in 1832, a major purpose of the paper was "the proper representation of our grievances to the people of the United States" (*Cherokee Phoenix*, vol. 4, no. 52, Aug. 11, 1832, emphasis added). Stories from the *Phoenix* were picked up by other papers, and sympathetic commentaries on the stories from those papers were in turn printed in the *Phoenix*. During two numbers in July 1831, for example, the *Phoenix* printed commentary from a dozen papers that had picked up its reportage of Georgia's abuses, such as the arrest of missionaries. See *Phoenix*, vol. 4, nos. 4 and 5, July 16 and 23, 1831.

76. *Phoenix*, vol. 4, no. 9, August 27, 1831.

77. *Phoenix*, vol. 4, no. 1, June 25, 1831.


79. Ross, 309. At this time the *Phoenix*, under the editorship of Elijah Hicks and in its last issues, suggested the inferiority of the land by reporting extensively on outbreaks of cholera among emigrants there; see, for example, vol. 5, no. 52, May 31, 1834.


81. See Boudinot, 178.

82. While the General Allotment (Dawes) Act of 1887 abolished national ownership in common and required individuals to take separate allotments, the Cherokees lost less total land under the Act than did most nations. See Prucha, 2:754.

83. Perdue and Green, *Cherokee Removal*, 78.

84. Ibid., 80–81.

85. This "first deliberate attempt in prose fiction" was "singularly successful with the public," Simms later noted in reflecting on the beginnings of his career (*Guy Rivers*, 10, hereafter cited parenthetically).

86. Simms's premature removal of the Cherokees from his fictional landscape becomes especially emphatic if we recall that elsewhere Simms would argue that the treatment of Indian subject matter (even intermarriage with whites) gave American writers a unique opportunity to create a national literature and distinguish it from England's. See Maddox, 37–40.

87. On the Georgia resolution and the actions of the Guard, see McLoughlin, 432–33.


90. Walker points out that Ridge does not mention the force of California law in excluding Mexicans from the gold fields. They had to pay an oppressive tax from which Americans and European immigrants were exempt. See *Indian Nation*, 126.


92. Ibid., 91.

93. On Ridge's careful efforts to document the spaces Joaquin occupies, see Lowe, "Am I Joaquin?"

94. Walker argues that Ridge's "oppos[es] a concept of natural law to mere legalisms, at times making the law the opposite of justice, and generally insisting that honor requires individuals not protected by law to transgress its boundaries even to the extent of murder" (112).

95. Parins, 21, 29.

96. For example, in a letter of 1849 to his cousin, Stand Watie, he writes that "there is a deep-seated principle of revenge in me which will never be satisfied until it reaches its object... Whenever you say the word, I am there," referring to a plot to capture John Ross (Parins, 56). Weaver reads the novel as "a thinly veiled revenge fantasy in which the Mexicans stand in for pro-Removal Cherokees and the Anglos represent, not themselves, but other Cherokees—the Ross party" (*That the People Might Live*, 78, emphasis in original).


98. Cherokees do appear at one point in the novel, assisting the whites in the pursuit of Joaquin by extorting information from two Mexicans who sympathize with the outlaw, then hanging them (124–28). The episode seems to recall the Ross party's execution of members of the Ridge party; see Lowe, 115–14.

99. Ridge himself was never free of that burden. The "Publishers' Preface" to the novel described him, with amazing inaccuracy, as "a 'Cherokee Indian' born in the woods—reared in the midst of the wildest scenery" (2).


101. A full review of the literature is beyond the scope of the present study. Worster gives a good account in *Wealth of Nature*, 45–111.

102. I should point out that the Cherokee tradition of households occupying and using but not owning agricultural land over generations has only a partial analogue in the white nostalgic ideal of the family farm, despite the pictures of middle landscapes that the Cherokees painted for white viewing. The farm crises of the 1980s and 1990s especially have shown the generational continuity of the family farm to be inconsistent in the long run with capitalist property relations.

Chapter 7. "Co-Workers with Nature"

1. I wish to stress that the terms "Indian" and "white" within quotation marks represent schematized positions, not the actualities whose complications are evident, for example, in the history of the Cherokees' engagement with their environment.

2. In the first study of Cooper's ideas regarding the environment, Robinson...
categorizes the characters' positions according to this tripartite scheme; see "Conservation in Cooper's The Pioneers."
4. On Cooper's general project of educating his readership, see Wallace, Early Cooper and His Audience.
6. True Declaration, 15.
7. Ibid., 12.
8. Boell credits Man and Nature with originating the discourse of environmental apocalypticism evident in such works as Rachel Carson's Silent Spring; see Environmental Imagination, 301–2.
10. For a history of the perceptual approach, see Evernden, Social Creation of Nature. Evernden's own resolution to the dilemma is perceptual, moving from phenomenology to the reconstruction of an original or childlike sense of "wonder" or "astonishment" at the world.
11. A few years ago at the Modern Language Association's annual meeting, I attended a session on nature writing. To encourage audience participation, the presenters asked us to describe our current interests. When my turn came I said, "agriculture." Afterward, the man sitting next to me asked, "Agriculture? But farmers are the bad guys." I recall responding with something not very articulate about farmers being sensitive to the land in their own ways—my grandfather said he would never plow up his grove, because you had to leave some of the land for itself—and so on. Instead, I ought to have asked him what he'd eaten for breakfast and how it got to his table. We might not have agreed in the end, but such a response would, I imagine, have provided more common ground for conversation.
13. Cole's painting may have been inspired by Cooper's description. We know Cole was familiar with Cooper's works; for example, he painted a scene from Chapter 29 of Last of the Mohicans in 1827. Cole's Falls restores a human presence to the Kaaterskill, a lone Indian looking over the precipice, perhaps to register a movement or perhaps to experience its "astonishment" at the world. For evidence that Cole's contemporaries saw the figure of the Indian in this scene as "a natural growth," see Horwitz, By the Law of Nature, 45.
14. Ringe, Introduction to Pioneers, xxi. Smith sets this agenda by observing that Cooper was working through "the antithesis between nature and civilization, between freedom and law, that has governed most American interpretations of the westward movement" (Virgin Land, 60). Franklin further argues that Natty's "symbolic purpose" is "to speak for nature by speaking out for his own assaulted rights" (New World of James Fenimore Cooper, 105). As Thomas has demonstrated in his critique of this interpretive school, however, "Natty's forest freedom grows out of the same assumptions that justify Temple's legal system," for each defines freedom as independence from the wills of others (Cross-Examinations of Law and Literature, 41). Knowing that such freedom is a mere fiction under capitalist social relations, yet unable to imagine a reconfiguration of these relations, Cooper offers in Natty the compensatory fiction of escape.
15. Interference with spring sowing was so extensive as to lead to the invention of the seed drill, which buried the seeds to prevent the birds' access to the seeds. See Halliday, "Extinction of the Passenger Pigeon," 158.

17. Swann reprints the entire text of the law, passed March 31, 1798; see "Guns," 103–4.
18. I take this information on the lake whitefish (Coregonus clupeaformis) from Harman et al., State of Otsego Lake, 262.
19. Swann argues that this apparent contradiction indicates that Temple is interested in passing such laws primarily as a "symbol of power" (104). No doubt this is true, but as I will go on to discuss, that exercise of power is bound up with Temple's seemingly genuine, albeit misinformed, interest in resource conservation.
20. On railroads, logging, hunting, and the decline of the passenger pigeon in New York, see Steadman, "And Live on Pigeon Pie." Only thirty-six years after a colony of three million pigeons was observed in Petosky, Michigan, the species was extinct. The puzzling rapidity of the pigeon's decline indicated by such observations suggests that hunting, rather than habitat destruction, brought the population below a crucial threshold. Even when hunting became no longer economically feasible, the pigeon continued to decline because it was adapted to feeding and breeding in very large colonies; reproduction rates, a function of colony size, could no longer offset mortality. See Halliday, "Extinction."
21. Seining was finally banned on Otsego Lake in 1915 to protect not the whitefish but the lake trout. The whitefish and lake trout populations both remain relatively steady today, but the whitefish have diminished of late—not because of overfishing but because of the 1988 introduction of the alewife, which preys on whitefish hatchlings. See Harman et al., Otsego Lake, 3–4, 261–62, 275.
22. On William Cooper's failure in the sugar business, see Taylor, Cooper's Town, 119–34.
23. Ibid., 133–34.
25. Swann reprints the text of this law, which bans the killing of deer from January through July, 102–3.
26. Thomas cites this passage as evidence that Temple disagreed with the assumption that game ownership was vested in the state, but does not address passages in which Temple approves the New York legislature's passage of game laws; see Cross-Examinations, 33. Swann, linking game laws to the history of gun control in Europe, argues that they exercise class power and that Temple's approval of them indicates his aristocratic ambitions.
27. See Merchant, Ecological Revolutions, 185–90; Taylor, Cooper's Town, 89–93.
29. However, in a thoughtful analysis of the history of Western ideas about nature from the Renaissance through modern environmentalism, Evernden argues that the two most common positions in this history—one regarding nature as instrumental object and another regarding nature as "an extended self . . . entitled to the same concern as any other person"—both depend on a structure of separateness, a nature–culture dualism constructed by "the centrality of the perceiving human subject" (Social Creation, 101, 102).
30. This is roughly the idea of "classical static stability," which assumes "constancy [of an ecosystem] unless disturbed, and the ability and tendency to return to the state of constancy following a disturbance" (Botkin, Discordant Harmonies, 42). This view, predominant in the scientific community through the 1970s, is still the assumption on which much environmental policy is based. More recently, research such as extensive core-sample studies of pollen counts, which enable historical reconstructions of ecosystems over the past 70,000 years, suggests that
there is no determinate equilibrium state toward which any given region tends, but such research has only rarely impacted policy as yet. See Botkin, 51–71. Evidence of even such drastic climatic change as the ice ages was unavailable to Marsh.

31. On later, Enlightenment formulations of this idea (for example, Pope's "Essay on Man" or Buffon's Natural History) see Botkin, 85–86.


34. Merchant locates Thoreau's work on forest succession as a response to deforestation in New England; see Ecological Revolutions, 229–30.

35. Botkin observes that the first use of the term "succession" appears in Thomas Pownall's Topographical Description of the Dominion of the United States (1784), and therefore credits Thoreau only with the reintroduction of the term. However, Pownall does not describe one species succeeding another in a regular pattern, but only a general process of older trees succeeding younger trees. See Botkin, Discordant, 51, 52.


41. That is, Emerson too at least partly recognized the phenomenon of forest succession, but thought it could be improved through analogy to agricultural techniques of planting and harvest, for he assumed that a particular species died off because it had "exhausted [the soil] of the nutriment essential to it" and so was succeeded by another species that required different nutrients (29).


43. The historical answer to this question, of course, separated Thoreau's two aims. Native Americans were contained on reservations, although not ones large enough to permit even those tribes who did exist primarily as "a hunter race" to continue so. The National Park system, partly a result of Thoreau's influence on John Muir, cordoned of some land from all economic uses except tourism, our answer to Thoreau's call for a space of "true re-creation."

44. Whether the combined histories of the Bureau of Land Management, the National Forests, and the National Parks and National Monuments have subsequently lived up to Marsh's vision is another question, of course, one beyond the scope of the present study.

45. This concession of one's will to higher motives resembles the rhetoric of "transcendent or combinatory agency" that Horwitz finds characteristic of nineteenth-century American appeals to nature as ground of value, in which "individual identity and agency are perfected in their occulting, absorption, or sublimation by wider forces, usually called natural or universal" (Law of Nature, 240).

46. See Lowenthal, Introduction to Man and Nature, xxii. No doubt it also helped promote the passage of the Timber Culture Act of 1873, which offered western lands to settlers who would plant woods on their parcels. This act was a failure, since most of the specified lands were too arid to support trees, and was repealed in 1891. See Opie, Law of the Land, 101.

47. Review of Man and Nature, Scribner's, 120.


53. Smith, Works, 2:247. Leney identifies this passage as the first expression of the "American dream"; see American Dream, 217.


55. One recent text especially worth considering along these lines is Richard Powers's Gain. The penetrating description of environmental inputs and outputs required in the production of a disposable camera, for example, encapsulates the novel's larger meditation: "The world sells us at a loss, until we learn to afford it" (368).

56. Pigovian taxes, so called after the British economist A. C. Pigou, would measure all real costs of the production of a commodity, including environmental degradation and future generations' access to resources and a good environment, and make producers internalize those costs. The taxes would be re-invested in the development of sustainable modes of production, while the pricing structure would encourage changes in consumption and production patterns. For example, such a tax would price coal, which is currently the cheapest form of energy, as the most expensive, since it causes great environmental degradation in mining and is the most polluting of all nonrenewable energy sources. Solar energy, infinitely renewable and nonpolluting, would be the cheapest when all real costs are factored into its pricing. See Hawken, Ecology of Commerce, 82–90; Neumayer, Weak Versus Strong Sustainability, 26–27.

57. John Smith's uncertainty regarding Bermuda represents a possible exception. Marsh did call for further investigation in some cases, for example on forest succession, but would probably not have been prepared to understand any nonequilibrium findings. For a history of the equilibrium concept, its influence on environmental policy, and an outline of a new program for action based on an understanding of nature's dynamism, see Botkin, Discordant Harmonies. Botkin does not, however, address the question of agency, that is, the means by which such a program could be implemented.
Works Cited


<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Publisher</th>
<th>Location</th>
<th>Year</th>
</tr>
</thead>
</table>


McMahon, Sarah F. *A Comfortable Subsistence: The Changing Composition of


