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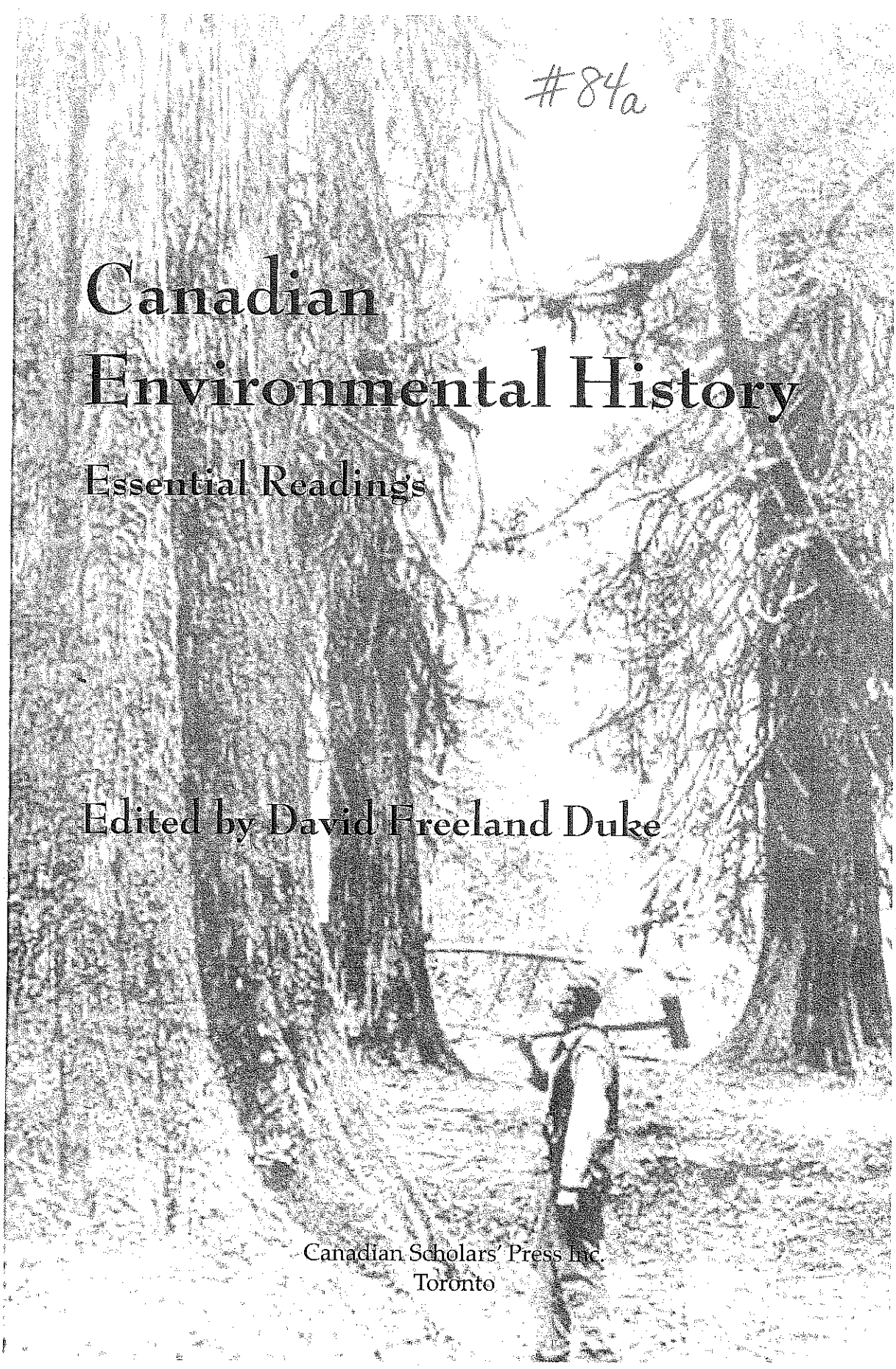
Canadian Environmental History

Essential Readings



Edited by David Freeland Duke

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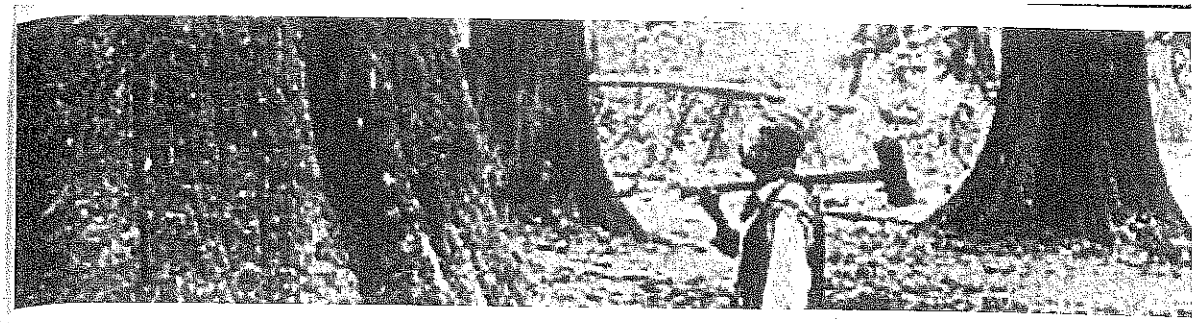

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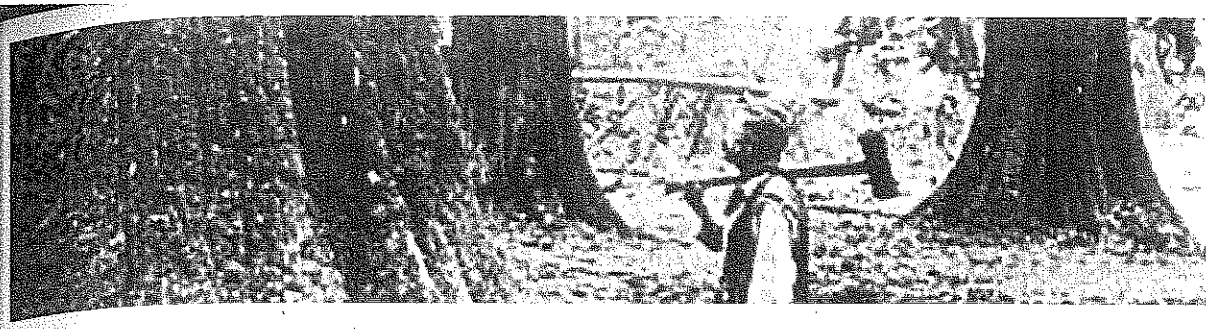

Chapter Three
Eve
Nature and Narrative

Carolyn Merchant

A Penobscot Indian story from northern New England explains the origin of maize. A great famine had deprived people of food and water. A beautiful Indian maiden appeared and married one of the young men of the tribe, but soon succumbed to another lover, a snake. On discovery she promised to alleviate her husband's sorrow if he would plant a blade of green grass clinging to her ankle. First he must kill her with his ax, then drag her body through the forest clearing until all her flesh had been stripped, and finally bury her bones in the centre of the clearing. She then appeared to him in a dream and taught him how to tend, harvest, and cook corn and smoke tobacco.[1]

This agricultural origin story taught Indians how to plant their corn in forest clearings and also that the Earth would continue to regenerate the human body through the corn plant. It features a woman (the corn maiden) and a male lover as central actors. It begins with the state of nature as drought and famine. Nature is a desert, a poor place for human existence. The plot features a woman as saviour. Through a willing sacrifice in which her body is returned to the Earth, she introduces agriculture to her husband and to the women who subsequently plant the corn, beans, and squash that provide the bulk of the food sustaining the life of the tribe. The result is an agroecological system based on the planting of interdependent polycultures in forest gardens. The story type is ascensionist and progressive. Women transform nature from a desert into a garden. From a tragic situation to despair and death, a comic, happy, and optimistic situation of continued life results. In this story, the valence of women as corn mothers is good; they bring bountiful gifts. The valence of nature ends as a good. The Earth is an agent of regeneration. Death is transformed into life through a reunification of the corn mother's body with the Earth. Even death results in a higher good.[2]

Into this bountiful world of corn mothers enter the Puritan fathers bringing their own agricultural origin story of Adam and Eve. The biblical myth begins where the Indian story ends—with an ecological system of polycultures in the Garden of Eden. A woman, Eve, shows "the man," Adam, how to pick fruit from the Tree

estern civilization since the ntury and its advent on the nent can be conceptualized rative of fall and recovery. recovery, as it emerged in n century, not only meant a the Fall, but also entailed ealth, reclamation of land, f property.[5]

y plot is the long, slow ning humans to the Garden n labour in the Earth. Three ize its argument: Christian n science, and capitalism. tory of the Fall provides science and capitalism the ry of the garden the end. sarian moment (the lapse) is the decline from garden first couple is cast from the ered paradise into a dark, eland.

vever, offered two versions ry that led to the Fall. In the on, God created the land, s, and fruit; the stars, sun, the birds, whales, cattle, er which he made "man in .; male and female created n and Eve were instructed, l multiply, and replenish ubdue it" and were given the fish of the sea, and over air, arid over every living th upon the earth." In the n, thought to have derived and earlier tradition, God e plants and herbs, next st, and then the garden of es for food (including the the Tree of the Knowledge il in the centre) and four ut of it. He then put "the len "to dress and keep it," sts and fowls from dust,

and brought them to Adam to name. Only then did he create Eve from Adam's rib. Genesis 3 narrates the Fall from the garden, beginning with Eve's temptation by the serpent, the consumption of the fruit from the Tree of the Knowledge of Good and Evil (which in the Renaissance becomes an apple), the expulsion of Adam and Eve from the garden "to till the ground from which he was taken," and finally God's placement of the cherubims and flaming sword at the entrance of the garden to guard the Tree of Life.[6]

During the Renaissance, artists illustrated the Garden of Eden story through woodcuts and paintings, one of the most famous of which is Lucas Cranach's 1526 painting of Eve offering the apple to Adam, after having been enticed by the snake coiled around the Tree of the Knowledge of Good and Evil. Writers from Dante to Milton depicted the Fall and subsequent quest for paradise, while explorers searched for the garden first in the Old and then in the New Worlds. Although settlers endowed new lands and peoples with Eden-like qualities, a major effort to recreate the Garden of Eden on Earth ultimately ensued. Seventeenth-century botanical gardens and zoos marked early efforts to reassemble the parts of the garden dispersed throughout the world after the Fall and the Flood.[7]

But beginning in the seventeenth century and proceeding to the present, New World colonists have undertaken a massive effort to reinvent the whole Earth in the image of the Garden of Eden. Aided by the Christian doctrine of redemption and the inventions of science, technology, and capitalism ("arte and Industrie"), the long-term goal of the recovery project has been to turn the Earth itself into a vast cultivated garden. The strong interventionist version in Genesis 1 legitimates recovery through domination, while the softer Genesis 2 version advocates dressing and keeping the garden through human management (stewardship). Human labour would redeem the souls of men and women, while cultivation and domestication would redeem the earthly wilderness. The End Drama envisions a reunification of the Earth with God (the Parousia), in which the redeemed earthly garden merges into a higher heavenly paradise. The Second Coming of Christ was to occur either at the outset of the thousand-year period of his reign on Earth (the millennium) or at the Last Judgment when the faithful were reunited with God at the resurrection.[8]

Greek philosophy offered the intellectual framework for the modern version of the recovery project. Parmenidean oneness represents the unchanging natural law that has lapsed into the appearances of the Platonic world. This fallen phenomenal world is incomplete, corrupt, and inconstant. Only by recollecting of the pure unchanging forms can the fallen partake of the original units. Recovered and Christianized in the Renaissance, Platonism provided paradigmatic ideals (such as that of the Garden of Eden) through which to interpret the earthly signs and signatures leading to the recovery.[9]

Modern Europeans added two components to the Christian recovery project—mechanistic science and *laissez-faire* capitalism to create a grand master narrative of Enlightenment. Mechanistic science supplies the instrumental knowledge for reinventing the garden on Earth. The Baconian-Cartesian-Newtonian project is premised on the power of technology to subdue and dominate nature, on the certainty of mathematical law, and on the unification of natural law into a single framework of explanation. Just as the alchemists tried to speed up nature's

labour through human intervention in the transformation of base metals into gold, so science and technology hastened the recovery project by inventing the tools and knowledge that could be used to dominate nature. Francis Bacon saw science and technology as the way to control nature and hence recover the right to the garden given to the first parents. "Man by the Fall, fell at the same time from his state of innocency and from his dominion over creation. Both of these losses can in this life be in some part repaired: the former by religion and faith; the latter by arts and science." Humans, he asserted, could "recover that right over nature which belongs to it by divine bequest," and should endeavour "to establish and extend the power and dominion of the human race itself over the [entire] universe."[10]

The origin story of capitalism is a movement from desert back to garden through the transformation of undeveloped nature into a state of civility and order.[11] Natural resources—"the ore in the mine, the stone unquarried [and] the timber unfelled"—are converted by human labour into commodities to be exchanged on the market. The Good State makes capitalist production possible by imposing order on the fallen worlds of nature and human nature. Thomas Hobbes's nation-state was the end result of a social contract created for the purpose of controlling people in the violent and unruly state of nature. John Locke's political theory rested on the improvement of undeveloped nature by mixing human labour with the soil and subduing the Earth through human dominion. Simultaneously, Protestantism helped to speed the recovery by sanctioning increased human labour just as science and technology accelerated nature's labour.[12]

Crucial to the structure of the recovery narrative is the role of gender encoded into the story. In the Christian religious story, the original oneness is male and the Fall is caused by a female, Eve, with Adam, the innocent bystander, being forced to pay the consequences as his sons are pushed into developing both pastoralism and farming.[13] While fallen Adam becomes the inventor of the tools and technologies that will restore the garden, fallen Eve becomes the Nature that must be tamed into submission. In the Western tradition, fallen Nature is opposed by male science and technology. The Good State that keeps unruly nature in check is invented, engineered, and operated by men. The Good Economy that organizes the labour needed to restore the garden is likewise a male-directed project.

Nature, in the Edenic recovery story, appears in three forms. As original Eve, nature is virgin, pure, and light—land that is pristine or barren, but having the potential for development. As fallen Eve, nature is disorderly and chaotic; a wilderness, wasteland, or desert requiring improvement: dark and witchlike, the victim and mouthpiece of Satan as serpent. As mother Eve, nature is an improved garden; a nurturing Earth bearing fruit; a ripened ovary; maturity. Original Adam is the image of God as creator, initial agent, activity. Fallen Adam appears as the agent of earthly transformation, the hero who redeems the fallen land. Father Adam is the image of God as patriarch, law, and rule—the model for the kingdom and state. These meanings of nature as female and agency as male are encoded as symbols and myths into American lands as having the potential for development, but needing the male hero, Adam. Such symbols are not essences because they do not represent characteristics necessary or essential to being female or male. Rather, they are historically constructed and derive from the origin stories of European settlers

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and European cultural and economic practices transported to and developed in the American New World. That they may appear to be essences is a result of their historical construction in Western history, not their immutable characteristics.

The Enlightenment idea of progress is rooted in the recovery of the garden lost in the Fall—the bringing of light to the dark world of inchoate nature. The lapsarian origin story is thus reversed by the grand narrative of Enlightenment that lies at the very heart of modernism. The controlling image of Enlightenment is the transformation from desert wilderness to cultivated garden. This complex of Christian, Greco-Roman, and Enlightenment components touched and reinforced each other at critical nodal points. As a powerful narrative, the idea of recovery functioned as ideology and legitimation for settlement of the New World, while capitalism, science, and technology provided the means of transforming the material world.

GRECO-ROMAN ROOTS OF THE RECOVERY NARRATIVE

In creating a recovery narrative that reversed the lapsarian moment of the Fall, Europeans reinforced the Christian image of the precipitous Fall from the Garden of Eden with pagan images of a gradual decline from the golden age. Hesiod (eighth century BC) told of the time of immortal men who lived on Olympus where all was "of gold" and "the grain-giving soil bore its fruits of its own accord in unstinted plenty, while they at their leisure harvested their fields in contentment amid abundance."[14] Ovid, in the *Metamorphoses* (AD 7), pictured the golden age as a time when a bountiful (unplowed) Mother Earth brought forth grains, fruits, honey, and nectar and people were peaceful, "unaggressive, and unanxious." Only in the decline of the subsequent silver, bronze, and iron ages did strife, violence, swindling, and war set in.[15]

Whereas Hesiod and Ovid offered elements that reinforced the Fall, Virgil and Lucretius introduced components of a recovery story that moved from "savagery" to "civilization." Nature was a principle of development, deriving from the Latin word *nascere*, "to be born." Each stage of development was inherent in the preceding stage, an actualization of a prior potential. The word "nation" derived from the same word, hence the state was born from the state of nature.[16] Virgil (70–19 BC) depicted a narrative of development from nature to nation that moved through four stages mimicking the human life cycle: (1) death and chaos, a world filled with pre-social "wild" peoples (winter); (2) birth and the pastoral, in which people grazed sheep on pastured lands (spring); (3) youth or farming by plowing and planting gardens (summer); (4) maturity, or the city (Rome) in the Garden (fall). For Virgil these four stages were followed by a return to death and chaos, whereas in the Christian myth the recovery was followed by redemption and a return to the original garden. Yet within each of Virgil's stages lies the potential to lapse back prematurely into the earlier chaotic or "savage" state.

The second or pastoral stage is like the Christian Garden of Eden—its loss is mourned and its innocence yearned for—but in the Roman story, it passes "naturally" to the third, or agricultural, stage.

Virgil's *Georgics* narrates the agricultural period in which humans actively labour in the Earth to cultivate it and themselves. Both society's potential and the Earth's potential are actualized and perfected.

When farmers till the ground and tend their crops, nature's bounty brings forth fruits: "Father Air with fruitful rains" descended on the "bosom of his smiling bride" to feed her "teeming womb."[17] The *Aeneid* reveals the fourth stage—the emergence of Rome as a city of culture and civilization within the pastoral and agricultural landscapes—*urbs in horto*—the city in the garden. The four developmental phases of nature and nation exist both temporally as stages and spatially as zones. The city is an actualization of movement from a chaotic "wild" periphery to a pastoral outer zone, a cultivated inner zone, and a "civilized" central place. Because nature is viewed as a cyclical development, the decline and fall of Rome is preordained in the final return to winter and chaos. Yet out of chaos comes a second golden age as "the great line of the ages is born anew." The "virgin" (Justice) returns and a "newborn boy" appears "at whose coming the iron race shall first cease and a golden race will spring up in the whole world." At this point the Roman and Christian versions of a second return converge, offering Europeans and Americans the possibility of the recovery of an Edenic golden age.[18]

Lucretius provides the elements for Thomas Hobbes's origin story of capitalism and the Good State as an emergence from the "state of nature." Lucretius's *De Rerum Naturum* (*Of the Nature of Things*) closely prefigures Hobbes's *Leviathan*. For both Lucretius and Hobbes the early state of human nature is disorderly, lawless, and chaotic. According to Lucretius, before the discovery of plow agriculture, wild beasts consumed humans and starvation was rampant.[19] But early civilization, nurtured by the taming of fire and the cooking of food, foundered on the discovery of gold, as human greed spawned violent wars. Just as Hobbes saw individual men in the state of nature as unruly and warlike, so Lucretius lamented that "things down to the vilest lees of brawling mobs succumbed, whilst each man sought unto himself dominion and supremacy." Just as Hobbes argued that people voluntarily gave up their ability to kill each other in the state of nature and entered into a civil contract enforced by the state, so Lucretius held that people out of their own free will submitted to laws and codes. The creation of civil law thus imposes order on disorderly humans, offering the possibility of recovery from the state of nature.[20]

Yet Lucretius's poem, as it came down to the Renaissance, ended not in recovery, but in death, as plague and pestilence overcame Athens. The poem breaks off on a note of extreme pessimism and utter terror; piles of dead bodies burn on funeral pyres and all hope is forsaken. Like Lucretius, Hobbes (who was also deemed an atheist) offered a profoundly pessimistic view of nature, human nature, and divinity. Humans who are basically competitive and warlike contest with each other on the commons and in the marketplace in the creation of a capitalist economy.[21]

Like civilization, nature for Lucretius ends in death and a return to the chaos of winter. As did humans, the Earth "whose name was mother" went through stages of life and death. She brought forth birds, beasts, and humans. The fields were like wombs, and the Earth's pores gave forth milk like a mother's breasts. Yet when the Earth had aged, she was like a worn-out old woman.[22]

In the seventeenth century, the Greek cyclical stories of nature and human society that ended in death and destruction were converted to the Christian redemption story during the battle between ancients and moderns. The declensionist narrative depicting a slide downward from golden

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age to iron age, from original wisdom to ignorance, from human giants to midgets, was transformed by the hope of recovery. Both nature and human nature were capable of redemption. Science and technology offered the means of transforming nature, labour in the Earth the means of saving human souls. The Earth could be plowed, cultivated, and improved as human beings mixed their labour with the soil. (For Locke, as opposed to Hobbes, the state of nature is good and labour has a positive valence.) Thus both the cultivated Earth and cultivated humans would be prepared for the final moment of redemption, or Parousia, when Earth would merge with heaven, recreating the original oneness. With the discovery of the New World, a New Earth could be reconstructed with the image of the original garden as paradigmatic ideal.

THE AMERICAN HEROIC RECOVERY NARRATIVE

In America, the recovery narrative propelled settlement and "improvement" of the American continent by Europeans. Euramerican men acted to reverse the decline initiated by Eve by turning it into an ascent back to the garden. Using science, technology, and biblical imagery, they changed first the eastern wilderness and then the western deserts into cultivated gardens. Sanctioned by the Genesis origin story, they subdued the "wilderness," replenished the Earth, and appropriated Indian homelands as free lands for settlement. Mercantile capitalism cast America as the site of natural resources, Africa as the source of enslaved human resources, and Europe as the locale of resource management. Timber, barrel staves, animal hides, herbal medicines, tobacco, sugar, and cotton were extracted from nature in the great project of "improving" the land. Men, as fallen Adam, became the heroic agents who transformed and redeemed fallen Nature.[23]

In New England, European settlers converted a "hideous and desolate wilderness" into "a second England for fertileness" in the space of a few decades. The Pilgrim migration, as recorded in the text of William Bradford, conforms to the six elements of the mythic heroic narrative identified by Russian folklorist Vladimer Propp: (1) the hero's initial absence; (2) his transference from one place to another; (3) the combat between hero and villain; (4) the hero's receipt of a gift; (5) the victory; (6) the final repair of the hero's initial absence.[24] In this case the hero, Bradford, leads his people through trials and tests in the struggle to recreate the garden in the New World.

In the first phase of the New England recovery story, the land is absent of the hero. Indian corn fields are abandoned and the Indians, victims of disease. As John Cotton put it: "When the Lord chooses to transplant his people, he first makes a country ... void in that place where they reside."[25] In the second, or transference phase, the hero, William Bradford, is transported from Old England to New England by ship. A spatial translocation takes place between two kingdoms, that of the Antichrist (the fleshpots of Old England) and the New Canaan, or promised land of New England. In the third, or combative phase, the hero is tested through struggle with the villain—the devil acting through nature. The mythic struggle between hero and villain is played out as a struggle between Bradford and the wilderness—the tempestuous ocean and the desolate forest, a land filled with "wild beasts and wild men." Bradford's faith in God and his

leadership of his people are continually called on, as storms wreak havoc with the small ship, the *Mayflower*, and the little band of settlers struggles to survive the grim winter on the shores of an unforgiving land. In the fourth phase the hero receives a gift from a helper, in this case "a special instrument sent [from] God" through the Indian Squanto, who not only speaks the Pilgrims' own language, but shows them how to "set their corn, where to take fish, and to procure other commodities." The fifth phase is the victory of the hero, as the corn is harvested, cabins and stockade are built, and the struggling band survives its first year. Nature, as wilderness, has been defeated. In the sixth and climactic phase the hero's initial absence has been repaired, the misfortunes are liquidated, and the Pilgrims are reborn. They celebrate their triumph over wilderness by their first harvest, achieved through the miracle of the recreated garden. By tilling and replenishing the land, the recovery of the garden in the New World has been launched and the American recovery myth created.[26]

Pilgrim victory was followed by Puritan victory when the Massachusetts Bay Colony added thousands of additional settlers to the new land, repeating the heroic journey across the Atlantic to advance the Edenic recovery. As the *Arabella* left England for the New World in 1629, Puritan refugees listened to John Winthrop quoting Genesis 1:28, "Be fruitful and multiply, and replenish the earth and subdue it." Boston pastor Charles Morton adhered to both the Genesis origin story and the Baconian ideal when he wrote in 1728 that, because of the sin of the first parents, agriculture and husbandry must be used to combat weeds and soil sterility through fencing, tilling, manuring, and draining the land. Almanac maker Nathaniel Ames in 1754 helped to justify the mechanistic science of the body in Edenic terms when he informed his readers that the Divine artificer initially had made the body of man "a machine capable of endless duration," but that, after Eve's ingestion of the forbidden apple, the living principle within had fallen into disharmony with the body, disrupting the smooth functioning of its parts.[27]

In the Chesapeake region, by the early eighteenth century, tobacco planters converted an "unjustly neglected" and "abused" Virginia into a ravishing garden of pleasure. Robert Beverley predicated Virginia's potential as a "Garden of the World," akin to Canaan, Syria, and Persia, on his countrymen's ability to overcome an "unpardonable laziness."[28] Tobacco cultivation became the means of participating in the European market, while simultaneously improving the land through labour. But the recovery was ever in danger from new lapsarian moments if people allowed themselves to indulge in laziness, narcotics, or alcohol. During the eighteenth and nineteenth centuries, migrants from the original colonies and immigrants from Europe explored, settled, and "improved" the uplands west of the Atlantic Coast, the intervales of the Appalachian Mountains, and the lowlands of the Mississippi Valley.

In the late 1820s and 1830s, Thomas Cole of the Hudson River school of painters depicted the American recovery narrative and the dangers of both the original and subsequent lapsarian moments. His *Expulsion from the Garden of Eden* (1827–1828) contrasts the tranquil, original garden on the right with the bleak, chaotic desert on the left, while in the centre God expels Adam and Eve through a gate. The garden features a meandering stream and luxuriant vegetation, while the desert comprises barren rock, hot winds,

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a wild cataract, an erupting volcano, and a wolf attacking a deer. *The Oxbow* (1836) portrays the possibility of recovery through recreating the Garden on Earth. The painting moves from dark wilderness on the left to an enlightened, tranquil, cultivated landscape on the right, bordering the curve of the peaceful Connecticut River. In the background, cutover scars in the forest on the hill apparently spell the Hebrew letters Noah, which, when viewed upside down from a God's eye view, form the word *shaddai*, meaning, "the Almighty." God's presence in the landscape recognizes God's covenant with Noah and anticipates the final reunion of God and the Earth at the Parousia. Humans can therefore redeem the land itself as garden, even as they redeem themselves through labouring in the Earth.[29]

In a series of paintings from the 1830s, Cole depicted the movement from "savagery" to "civilization" and the problem of lapsing back into the darkness of wilderness. Of an 1831 painting, *A Wild Scene*, he wrote, "The first picture must be a savage wilderness ... the figures must be savage—clothed in skins & occupied in the Chase— ... as though nature was just waking from chaos."[30] A subsequent series, *The Course of Empire*, followed Virgil's stages of emergence from "savagery"—*The Savage State, The Pastoral State, Consummation of Empire, Destruction of Empire*, and *Desolation*—to warn of lapsarian dangers that thwart progress and end in the ruin of civilization.

Ralph Waldo Emerson eulogized the recovered garden achieved through human dominion over nature in glowing rhetoric: "This great savage country should be furrowed by the plough, and combed by the harrow; these rough Alleganies should know their master; these foaming torrents should be bestridden by proud arches of stone; these wild prairies should be loaded with wheat; the swamps with rice; the hill-tops should pasture innumerable sheep and cattle.... How much better when the whole land is a garden, and the people have grown up in the bowers of a paradise."[31] Only after intensive development of the eastern seaboard did a small number of nineteenth-century urban artists, writers, scientists, and explorers begin to deplore the effects of the "machine in the garden."[32]

Similarly, Euramericans acted out the recovery narrative in transforming the Western deserts during the second half of the nineteenth century. The elements of the story again conform to the elements of Propp's heroic narrative. The land is absent of the heroes—the migrants themselves. They are transferred across inhospitable desert lands; engage in combat with hostile Indians, diseases, and starvation; receive gifts from God in the form of gold and free land; emerge victorious over nature and Indian; and liquidate the initial absence of the hero by filling and replenishing the land. In filling the land through settlement, the migrants heeded John Quincy Adams's 1846 call for expansion into Oregon: "to make the wilderness blossom as the rose, to establish laws, to increase, multiply, and subdue the earth, which we are commanded to do by the first behest of the God Almighty." They likewise heard Thomas Hart Benton's call to manifest destiny that the White race had "alone received the divine command to subdue and replenish the Earth: for it: is the only race that ... hunts out new and distant lands, and even a New World, to subdue and replenish."[33]

With Reverend Dwinell, they commemorated the 1869 joining of the Central Pacific and Union Pacific railroads, using the Bible to sanction human alteration

of the landscape. "Prepare ye the way of the Lord, make straight in the desert a highway before our God. Every valley shall be exalted, and every mountain and hill shall be made low and the crooked shall be made straight and the rough places plain." And in settling, ranching, and plowing the Great Plains, they reversed the biblical Fall from Eden by turning the "Great American Desert" into yet another "Garden of the World." The reclamation of arid lands west of the hundredth meridian through the technologies of irrigation fulfilled the biblical mandate of making the desert blossom as the rose, while making the land productive for capitalist agriculture.[34]

At the end of the nineteenth century, Frederick Jackson Turner's essay on the closing of the frontier in American history epitomized the heroic recovery narrative. The six phases of the heroic victory are again present in Turner's narrative, although it warns of impending declension as the frontier closes. (1) The frontier is defined by the absence of settlement and civilization. "Up to and including 1880, the country had a frontier of settlement, but at present the unsettled area has been ... broken." (2) Europeans are transferred across space as the succession of frontier lines moves west, and they "adapt ... to changes involved in crossing the continent." Stand at Cumberland gap and watch the procession—the buffalo following the trail to the salt lick, the trapper, the miner, the rancher, and the farmer follow each other in succession; stand at South Pass a century later and watch the same succession again. (3) The individual hero is in combat with the villain—again the wilderness, Indians, and wild beasts. "The wilderness masters the colonist." The encounter with wilderness "strips off the garments" of European civilization and "puts him in the log cabin of the Cherokee and Iroquois." (4) The heroes receive the gift of free land. But "never again," Turner warns, "will such gifts of free land offer themselves." (5) The encounter with the frontier transforms hero into victor. "Little by little he transforms the wilderness, but the outcome is not the old Europe ... here is a new product that is American." (6) Democracy and American civilization "in a perennial rebirth" fill the land, liquidating the initial absence. "Democracy is born of free land."[35] With frontier expansion, temporal recovery through science and capitalism merges with spatial recovery through acquisition of private property.

INDIANS IN THE RECOVERY NARRATIVE

The heroic recovery narrative that guided settlement is notable for its treatment of Indians. Wilderness is the absence of civilization. Although many Euramericans apparently perceived Indians as the functional equivalent of wild animals, they nevertheless believed the Indian survivors possessed the potential to be "civilized" and hence to participate in the recovery as settled farmers. American officials changed the Indians' own origin stories to make them descendants of Adam and Eve; hence they were not even indigenous to America. Thomas L. McHenry, who formulated Indian policy in the 1840s, said that the whole "family of man" came from "one original and common stock" of which the Indian was one branch. "Man ... was put by his creator in the garden, which was eastward in Eden, whence flowed the river which parted, and became into four heads; and that from his fruitfulness his [the Indian] species were propagated." The commissioner of Indian affairs in 1868 deemed them "capable of civilization and christianization." A successor in

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1892 argued that since Indian children were "made in the image of God, being the likeness of their Creator," they had the "same possibilities of growth and development" as other children. An Indian baby could become "a cultivated refined Christian gentleman or lovely woman."[36]

Euramericans attempted to transform Indians from hunters into settled farmers by first removing them to lands west of the Mississippi, then to reservations, and later by allotting them 160-acre plots of private property. Thomas Jefferson saw them as capable of participating in the recovery narrative when he told a delegation in 1802 that he would be pleased to see them "cultivate the earth, to raise herds of useful animals and to spin and weave."[37] With Indians largely vanquished and moved to reservations by the 1890s, twentieth-century conservationists turned "recovered" Indian homelands into parks, set aside wilderness areas as people-free reserves where "man himself is a visitor who does not remain," and managed forests for maximum yield and efficiency. With the taming of wilderness, desert, and "wild men," the recovery story reached an apparently happy ending.[38]

But Indians, for the most part, rejected the new narrative. With some exceptions, they resisted the roles into which they were cast and the lines they were forced to speak. They objected to characterizations of their lands as wilderness or desert, calling them simply home. As Chief Luther Standing Bear put it, "We did not think of the great open plains, the beautiful rolling hills, and winding streams with tangled growth, as 'wild.' Only to the white man was nature a wilderness and only to him was the land 'infested' with 'wild' animals and 'savage' people. To us it was tame. Earth was bountiful...."[39]

While adopting the Christian religion, Indians often emphasized those aspects compatible with traditional beliefs and participated in the ceremonial and celebratory aspects with greater enthusiasm than in the more austere, otherworldly practices.[40] Although taught to read and cipher, they often rejected White society's science and technology as useless for living. As Franklin satirized the colonists' effort, the Indians, when offered the opportunity to attend the College of William and Mary in Virginia, politely considered the matter before refusing:

> Several of our young people were formerly brought up at the colleges of the northern provinces; they were instructed in all your sciences; but when they came back to us they were bad runners; ignorant of every means of living in the woods; unable to bear either cold or hunger; knew neither how to build a cabin, take a deer, or kill an enemy; spoke our language imperfectly, and were therefore neither fit for hunters, warriors, or counsellors; they were totally good for nothing. We are, however, none the less obliged by your kind offer, tho' we decline accepting it; and to show our grateful sense of it, if the gentlemen of Virginia will send us a dozen of their sons, we will take great care of their education, instruct them in all we know, and make men of them.[41]

FEMALE NATURE IN THE RECOVERY NARRATIVE

An account of the history of American settlement as a lapsarian and recovery narrative must also consider the crucial role of nature conceptualized as female in the very structure of the plot. The rhetoric of American settlement is filled with language that casts nature as female object to be transformed and men as the agents of change. Allusions to Eve as virgin land to be subdued, as fallen nature

to be redeemed through reclamation, and as fruitful garden to be harvested and enjoyed are central to the particular ways in which American lands were developed. The extraction of resources from "nature's bosom," the penetration of "her womb" by science and technology, and the "seduction" of female land by male agriculture reinforced capitalist expansion.[42]

Images of nature as female are deeply encoded into the texts of American history, art, and literature and function as ideologies for settlement. Thus Thomas Morton, in praising New England as a new Canaan, likened its potential for development by "art and industry" to a "faire virgin longing to be sped and meet her lover in a Nuptiall bed." Now, however, "her fruitfull wombe, not being enjoyed is like a glorious tombe."[43] Male agriculturalists saw in plow technology a way to compel female nature to produce. Calling Bacon "the grand master of philosophy" in 1833, Massachusetts agricultural improver Henry Colman promoted Bacon's approach to recovering the garden through agriculture. "The effort to extend the dominion of man over nature," he wrote, "is the most healthy and most noble of all ambitions." He characterized the Earth as a female whose productivity could help to advance the progress of the human race. "Here man exercises dominion over nature ... commands the earth on which he treads to waken her mysterious energies ... compels the inanimate earth to teem with life; and to impart sustenance and power, health and happiness to the countless multitudes who hang on her breast and are dependent on her bounty."[44]

A graphic example of female nature succumbing to the male plow is provided by Frank Norris in his 1901 novel *The Octopus*, a story of the transformation of California by the railroad. Here the Earth is female, sexual, and alive. Norris writes,

> The great brown earth turned a huge flank to [the sky], exhaling the moisture of the early dew.... One could not take a dozen steps upon the ranches without the brusque sensation that underfoot the land was alive, ... palpitating with the desire of reproduction. Deep down there in the recesses of the soil, the great heart throbbed once more, thrilling with passion, vibrating with desire, offering itself to the caress of the plough, insistent, eager, imperious. Dimly one felt the deep-seated trouble of the earth, the uneasy agitation of its members, the hidden tumult of its womb, demanding to be made fruitful, to reproduce, to disengage the eternal renascent germ of Life that stirred and struggled in its loins....[45]

In Norris's novel, the seduction of the female Earth was carried out on a massive scale by thousands of men operating their plows in unison on a given day in the spring. "Everywhere throughout the great San Joaquin," he wrote, "unseen and unheard, a thousand ploughs up-stirred the land, tens of thousands of shears clutched deep into the warm, moist soil."[46] And Norris leaves no doubt that the men's technology, the plow, is also male and that the seduction becomes violent rape:

> It was the long stroking caress, vigorous, male, powerful, for which the Earth seemed panting. The heroic embrace of a multitude of iron hands, gripping deep into the brown, warm flesh of the land that quivered responsive and passionate under this rude advance, so robust as to be almost an assault, so violent as to be veritably brutal. There, under the sun and under the speckless sheen of the sky, the wooing of the Titan began, the vast primal passion, the two world-forces,

> the elemental Male and Female, locked in a colossal embrace, at grapples in the throes of an infinite desire, at once terrible and divine, knowing no law, untamed, savage, natural, sublime.[47]

The narrative of frontier expansion is a story of male energy subduing female nature, taming the wild, plowing the land, recreating the garden lost by Eve. American males lived the frontier myth in their everyday lives, making the land safe for capitalism and commodity production. Once tamed by men, the land was safe for women. To civilize was to bring the land out of a state of savagery and barbarism into a state of refinement and enlightenment. This state of domestication, of civility, is symbolized by woman and "womanlike" man. "The man of training, the civilizee," reported *Scribner's Monthly* in November 1880, "is less manly than the rough, the pioneer."[48]

But the taming of external nature was intimately linked to the taming of internal nature, the exploitation of non-human nature to the exploitation of human nature. The civilization process not only removed wild beasts from the pastoral lands of the garden, it suppressed the wild animal in men. Crévecoeur, in 1782, noted that on the frontier, "men appear to be no better than carnivorous animals ... living on the flesh of wild animals." Those who farmed the middle settlements, on the other hand, were "like plants," purified by the "simple cultivation of the earth," becoming civilized through reading and political discourse.[49] Or, as Richard Burton put it in 1861, "The civilizee shudders at the idea of eating wolf."[50] Just as the Earth is female to the farmer who subdues it with the plow, so wilderness is female to the male explorer, frontiersman, and pioneer who tame it with the brute strength of the ax, the trap, and the gun. Its valence, however, changes from the negative satanic forest of William Bradford and the untamed wilderness of the pioneer (fallen Eve) to the positive pristine Eden and Mother Earth of John Muir (original and Mother Eve) and the parks of Frederick Law Olmsted. As wilderness vanishes before advancing civilization, its remnants must be preserved as test zones for men (epitomized by Theodore Roosevelt) to hone male strength and skills.[51]

Civilization is the final end, the telos, toward which "wild" Nature is destined. The progressive narrative undoes the declension of the Fall. The "end of nature" is civilization. Civilization is thus nature natured. *Natura naturata*—the natural order, or nature ordered and tamed. It is no longer nature naturing, *Natura naturans*—nature as creative force. Nature passes from inchoate matter endowed with a formative power to a reflection of the civilized natural order designed by God. The unruly energy of wild female nature is suppressed and pacified. The final happy state of nature natured is female and civilized—the restored garden of the world.[52]

THE CITY IN THE GARDEN

The city represents the next stage of the recovery narrative—the creation of the City in the Garden (Virgil's *urbs in horto*) by means of the capitalist market. The city epitomizes the transformation of female nature into female civilization through the mutually reinforcing powers of male energy and interest-earning capital. Frank Norris, in his second novel, *The Pit* (1903), reveals the connections.[53] In writing of Chicago and the wheat pit at the Board

of Trade (a story brilliantly told in Willian Cronon's *Nature's Metropolis*, inspired in part by Norris's book), Norris depicts the city as female.[54] The city is the locus of power that operates in the natural world, sweeping everything toward its centre. It is the bridge between civilized female form and the raw matter surrounding hinterlands, drawing that matter toward it, as natural resources are transformed into capitalist commodities. Chicago, writes Norris,

> the Great Grey City, brooking no rival, imposed its dominion upon a reach of country larger than many a kingdom of the Old World. For thousands of miles beyond its confines was the influence felt. Out, far out, far away in the snow and shadow of Northern Wisconsin forests, axes and saws bit at the bark of century old trees, stimulated by this city's energy. Just as far to the southward pick and drill leaped to the assault of veins of anthracite moved by her central power. Her force turned the wheels of harvester and seeder a thousand miles distant in Iowa and Kansas. Her force spun the screws and propellers of innumerable squadrons of lake steamers crowding the Sault Sainte Marie. For her and because of her all the Central States, all the Great Northwest roared with traffic and industry; sawmills screamed; factories, their smoke blackening the sky, slashed and flamed; wheels turned, pistons leaped in their cylinders; cog gripped cog; beltings clasped the drums of mammoth wheels; and converters of forges belched into the clouded air their tempest breath of molten steel.[55]

The city transforms the matter of nature in the very act of pulling it inward. Like Plato's female soul of the world, turning herself within herself, the city provides the source of motion that permeates and energizes the world around it, the bridge between raw changing matter and final civilized form. In Norris's novel, men at first seem subordinate to the city's higher force, acting merely as agents in the preordained purpose of transforming nature into civilization. They facilitate the change from *Natura naturans* into *Natura naturata*, from natural resource into fabricated product. Operating the steam engines, sawmills, factories, lumber barges, grain elevators, trains, and switches that make Chicago an industrial city, workers shout and signal as trains daily debouch businessmen, bringing with them trade from country to city. This process of "civilization in the making," says Norris, is like a "great tidal wave," an "elemental," "primordial" force, "the first verses of Genesis." It "subdu[es] the wilderness in a single generation," through the "resistless subjugation of ... the lakes and prairies."[56]

Yet behind the scenes other men, the capitalist speculators of the Chicago Board of Trade, attempt to manipulate the very forces of nature, pushing the transformation faster and faster. Capitalism mystifies by converting living nature into dead matter and by changing inert metals into living money.[57] To the capitalist puppeteers, nature is a doll-like puppet controlled by the strings of the wheat trade that changes money into interest-earning capital. Male minds calculate the motions that control the inert matter below.

To Norris's capitalist, Curtis Jadwin, nature is dead. Only money is alive, growing and swelling through the daily trade of the wheat pit. With the bulls and bears of the marketplace the only apparent living things he encounters, Jadwin utterly fails to account for the Earth and the wheat as alive. Yet as Jadwin, the bull trader, corners the market to obtain complete control over the bears, driving the price higher and higher, the living

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wheat planted by hundreds of farmers throughout the heartland rises from the soil as a gigantic irrepressible force. The capitalist's manipulation of apparently dead nature has immense environmental consequences. Jadwin, Norris writes, had "laid his puny human grasp upon Creation and the very earth herself." The "great mother ... had stirred at last in her sleep and sent her omnipotence moving through the grooves of the world, to find and crush the disturber of her appointed courses."[58]

But in the late nineteenth century, as the frontier closes, forests disappear, and the land is made safe for civilization, American men begin to lament the loss of wild nature. There is an apparent need to retain wilderness as a place for men to test maleness, strength, and virility and an apparent association of men with nature.[59] Similarly, women are symbolized as the moral model that suppresses internal sexual libido. But nature as wilderness does not *become* male, nor does civilization *become* female in a reversal of the so-called universal association of female to nature and male to culture identified by Sherry Ortner.[60] There is no real reversal of male/female valences in the closing chapters of the story of frontier expansion. In the story of American progress, males continue to be the transforming agents between active female nature and civilized female form, making the land safe for women and men alike, suppressing both unpredictable external nature and unruly internal nature.

Nor are nature and culture, women and men, binary opposites with universal or essential meanings. Nature, wilderness, and civilization are socially constructed concepts that change over time and serve as stage settings in the progressive narrative. So too are the concepts of male and female and the roles that men and women act out on the stage of history. The authors of such powerful narratives as *laissez-faire* capitalism, mechanistic science, manifest destiny, and the frontier story are usually privileged elites with access to power and patronage. Their words are read by persons of power who add the new stories to the older biblical story. As such, the books become the library of Western Culture. The library, in turn, functions as ideology when ordinary people read, listen to, internalize, and act out the stories told by their elders—the ministers, entrepreneurs, newspaper editors, and professors who teach and socialize the young.

The most recent chapter of the book of the recovery narrative is the transformation of nature through biotechnology. From genetically engineered apples to Flavr-Savr tomatoes, the fruits of the original (evolved) garden are being redesigned so that the salinated irrigated desert can continue to blossom as the rose. In the recovered Garden of Eden, fruits ripen faster, have fewer seeds, need less water, require fewer pesticides, contain less saturated fat, and have longer shelf lives. The human temptation to engineer nature is reaching too close to the powers of God, warn the Jeremiahs, who depict the snake coiled around the Tree of the Knowledge of Good and Evil as the DNA spiral. But the progressive engineers who design the technologies that allow the recovery to accelerate see only hope in the new fabrications.

The twentieth-century Garden of Eden is the enclosed shopping mall decorated with trees, flowers, and fountains in which people can shop for nature at the Nature Company, purchase "natural" clothing at Esprit, sample organic foods and rain-forest crunch in kitchen gardens, buy twenty-first-century products at Sharper Image, and play virtual reality games in

which SimEve is reinvented in Cyberspace. This Garden in the City recreates the pleasures and temptations of the original garden and the golden age where people can peacefully harvest the fruits of Earth with gold grown by the market. The mall, enclosed by the desert of the parking lots surrounding it, is covered by glass domes reaching to heaven, accessed by spiral staircases and escalators affording a vista over the whole garden of shops. The "river that went out of Eden to water the garden" is reclaimed in meandering streams lined with palm trees and filled with bright orange carp. Today's malls feature stone grottos, trellises decorated with flowers, life-sized trees, statues, birds, animals, and even indoor beaches that simulate paradigmatic nature as a cultivated, benign garden. With their engineered spaces and commodity fetishes, they epitomize consumer capitalism's vision of the recovery from the Fall.[61]

CRITIQUES OF THE RECOVERY NARRATIVE

The modern version of the recovery narrative, however, has been subjected to scathing criticism. Postmodern thinkers contest its Enlightenment assumptions, while cultural feminists and environmentalists reverse its plot, depicting a slow decline from a prior golden age, not a progressive ascent to a new garden on Earth. The critics' plot does not move from the tragedy of the Fall to the comedy of an earthly paradise, but descends from an original state of oneness with nature to the tragedy of nature's destruction. Nevertheless, they too hope for a recovery, one rapid enough to save the Earth and society by the mid-twenty-first century. The meta-narrative of recovery does not change, but the declensionist plot, into which they have cast prior history, must be radically reversed. The postmodern critique of modernism is both a deconstruction of Enlightenment thought and a set of reconstructive proposals for the creation of a better world.

The identification of modernism as a problem rather than as progress was sharply formulated by Max Horkheimer and Theodor Adorno in the opening sentences of their 1944 *Dialectic of Enlightenment*: "The fully enlightened earth radiates disaster triumphant. The program of the enlightenment was the disenchantment of the world; the dissolution of myths and the substitution of knowledge for fancy." They criticize both Francis Bacon's concept of the domination of nature and Karl Marx and Friedrich Engels's optimism that the control of nature would lead to advancement. They faulted the reduction of nature to mere number by mechanistic science and capitalism: "Number becomes the canon of the Enlightenment. The same equations dominate bourgeois justice and commodity exchange.... Myth turns into enlightenment and nature into mere objectivity."[62]

Among the critics of modernism are many feminists and environmentalists who propose a reversal that will initiate a new millennium in the twenty-first century. Cultural feminists and cultural ecofeminists see the original oneness as female, the *Terra Mater* of the neolithic era, from which emerged the consciousness of differences between humans and animals, male and female, people and nature, leading to dominance and submission. The advent of patriarchy initiates a long decline in the status of women and nature. Men's plow agriculture took over women's gathering and horticultural activities, horse-mounted warriors injected violence into a largely peaceful Old European

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culture, and male gods replaced female Earth deities in origin stories. In the proposed recovery, Eve is revisioned as the first scientist, Sophia as ultimate wisdom, and the goddess as symbol of female power and creativity. Feminist religious history redirects inquiry into the gendered nature of the original oneness as both male and female. The recovery would therefore be a feminist or an egalitarian world.[63]

Feminist science sees the original mind as having no sex, and hence accessible to male and female minds alike. It has been men, many feminists would argue, who invented the science and technology and organized the market economies that made nature the victim in the ascent of "man." For such feminists, the new narrative entails reclaiming women's roles in the history of science and asserting female power in contemporary science and technology. Hence both sexes can participate in the recovery.[64]

Environmentalism, like feminism, reverses the plot of the recovery narrative, seeing history as a slow decline, not a progressive movement that made the desert blossom as the rose. The recovery story is a false story; an original garden became a degraded desert. Pristine nature, not innocent man, has fallen. The decline from Eden was slow, rather than a precipitous lapsarian moment as in the Adam and Eve origin story. Over the millennia from the paleolithic to the present, nature has been the victim of both human hubris and social changes that overcome "the necessities of nature" through domestication, cultivation, and commodification of every aspect of an original, evolved, pre-human garden. So-called advances in science, technology, and economy actually accelerate the decline.[65]

As the twentieth century drew to a close and the second great millennium since the birth of Christ reached its end, the environmental decline approached a crisis. The greenhouse effect, the population explosion, the destruction of the ozone layer, the extinction of species, and the end of wilderness are all subplots in a grand narrative of environmental endism. Predictions of crisis, such as those of Paul Ehrlich in "Ecocatastrophe" (1969), the Club of Rome in *Limits to Growth* (1972) and of Bill McKibben in *The End of Nature* (1989), abound, as first (evolved, pre-human) nature is totally subsumed by humans and the human artifacts of second (commodified) nature.[66]

Like feminists, environmentalists want to rewrite the modern progressive story. Viewing the plot as declensionist rather than progressive, they nevertheless opt for a recovery that must be put in place by the mid-twenty-first century. "Sustainability" is a new vision of the recovered garden, one in which humanity will live in a relationship of balance and harmony with the natural world. Environmentalists who press for sustainable development see the recovery as achievable through the spread of non-degrading forms of agriculture and industry. Preservationists and deep ecologists strive to save pristine nature as wilderness before it can be destroyed by development. Restoration ecologists wish to marshal human labour to restore an already degraded nature to an earlier, pristine state. Social ecologists and green parties devise new economic and political structures that overcome the domination of human beings and non-human nature. Women and nature, minorities and nature, other animals and nature, will be fully included in the recovery. The regeneration of nature and people will be achieved through social and environmental justice. The End Drama envisions a post-patriarchal, socially just ecotopia for the post-millennial world of the twenty-first century.[67]

CHAOS THEORY AND PARTNERSHIP ETHICS

Seeing Western history as a recovery narrative, with feminism and environmentalism as reversals of the plot, brings up the question of the character of the plot itself. The declensionist and progressive plots that underlie the meta-narrative of recovery both gain power from their linearity. Linearity is not only conceptually easy to grasp, but it is also a property of modernity itself. Mechanistic science, progress, and capitalism all draw power from the linear functions of mathematical equations—the upward and downward slopes of straight lines and curves. To the extent that these linear slopes intersect with a real material world, they refer to a limited domain only. Chaos theory and complexity theory suggest that only the unusual domain of mechanistic science can be described by linear differential equations. The usual—that is, the domain of everyday occurrences, such as the weather, turbulence, the shapes of coastlines, the arrhythmic fibrillations of the human heart—cannot be so easily described. The world is more complex than we know or indeed can ever know. The comfortable predictability of the linear slips away into the uncertainty of the indeterminate—into discordant harmonies and disorderly order.

The appearance of chaos as an actor in science and history in the late twentieth century is not only symptomatic of the breakdown of modernism, mechanism, and, potentially, capitalism, but suggests the possibility of a new birth, a new world, a new millennium—the order out of chaos narrative of Ilya Prigogine and Isabelle Stengers. But chaos theory also fundamentally destabilizes the very concept of nature as a standard or referent. It disrupts the idea of the "balance of nature," of nature as resilient actor or mother who will repair the errors of human actors and continue as fecund garden (Eve as mother). It questions the possibility that humans as agents can control and master nature through science and technology, undermining the myth of nature as virgin female to be developed (Eve as virgin). Chaos is the re-emergence of nature as power over humans, nature as active, dark, wild, turbulent, and uncontrollable (fallen Eve). Ecologists characterize "Mother Nature" as a "strange attractor" while turbulence is seen to be encoded with gendered images of masculine channels and feminine flows.[68] Moreover, in the chaotic narrative, humans lose the hubris of fallen Adam that the garden can be recreated on Earth. The world is not created by a patriarchal God *ex nihilo*, but emerges out of chaos. Thus the very possibility of the recovery of a stable original garden—the plot of the recovery meta-narrative—is itself challenged.

Recognition of history as a meta-narrative raises the further question of the relativity of the histories through which we are educated and of our own lives as participants in the plots they tell. Like our nineteenth-century counterparts, we live our lives as characters in the grand narrative into which we have been socialized as children and conform as adults. That narrative is the story told to itself by the dominant society of which we are a part. We internalize narrative as ideology. Ideology is a story told by people in power. Once we identify ideology as a story—powerful and compelling, but still only a story—we realize that by rewriting the story, we can challenge the structures of power. We recognize that all stories can and should be challenged.

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and enter into a story with a different plot? More important, can we change the plot of the grand master narrative of modernism? Where do I as author of this text stand in relationship to it? As a product of modernism, mechanism, and capitalism, I have internalized the values of the recovery narrative I have sought to identify. I participate in the progressive recovery narrative in my daily work, my wages for intellectual labour, my aspirations for a better material life, and my enjoyment of the profits my individual achievements have wrought. Yet I also believe, despite the relativism of environmental endism, that the environmental crisis is real—that the vanishing frogs, fish, and songbirds are telling us a truth. I am also a product of linear thinking and set up this recovery narrative to reflect the very linearity of progressive history. This is history seen from a particular point of view, the view I have identified as the dominant ideology of modernism. I also believe my recovery narrative reflects a fundamental insight into how nature has been historically constructed as a gendered object.

Yet both history and nature are extremely complex, complicated, and non-linear. What would a chaotic, non-linear, non-gendered history with a different plot look like? Would it be as compelling as the linear version, even if that linear version were extremely nuanced and complicated? A postmodern history might posit characteristics other than those identified with modernism, such as many authorial voices; a multiplicity of real actors; acausal, non-sequential events; non-essentialized symbols and meanings; dialectical action and process rather than the imposed logos of form; situated and contextualized, rather than universal knowledge. It would be a story (or multiplicity of stories) that perhaps can only be acted and lived, not written at all.

I too yearn for a recovery from environmental declension—for my own vision of a post-patriarchal, socially just ecotopia for the third millennium. My vision entails a partnership ethic between humans (whether male or female), and between humans and non-human nature. For most of human history, non-human nature has had power over humans. People accepted fate while propitiating nature with gifts, sacrifices, and prayer (often within hierarchical human relationships). Since the seventeenth century, however, some groups of people have increasingly gained great power over nature and other human groups through the interlinked forces of science, technology, capitalism (and state socialism), politics, and religion.

A partnership ethic would bring humans and non-human nature into a dynamically balanced, more nearly equal relationship. Humans, as the bearers of ethics, would acknowledge non-human nature as an autonomous actor that cannot be predicted or controlled except in very limited domains. We would also acknowledge that we have the potential to destroy life as we currently know it through nuclear power, pesticides, toxic chemicals, and unrestrained economic development, and exercise specific restraints on that ability. We would cease to create profit for the few at the expense of the many. We would instead organize our economic and political forces to fulfill people's basic needs for food, clothing, shelter, and energy, and to provide security for health, jobs, education, children, and old age. Such forms of security would rapidly reduce population growth rates since a major means of providing security would not depend on having large numbers of children, especially boys. A partnership ethic would be a relationship between a human community and a non-human community in a particular place, a place

that recognizes its connections to the larger world through economic and ecological exchanges. It would be an ethic in which humans act to fulfill both human needs and nature's needs by restraining human hubris. Guided by a partnership ethic, people would select technologies that sustained the natural environment by becoming co-workers and partners with non-human nature, not dominators over it. [...]

A partnership ethic implies a remythicizing of the Edenic recovery narrative or the writing of a new narrative altogether. The new myth would not accept the patriarchal sequence of creation, or even the milder phrase "male and female, created he them," but might instead emphasize simultaneous creation, co-operative male/female evolution, or even an emergence out of chaos or the Earth. It would not accept the idea of subduing the Earth, or even dressing and keeping the garden, since both entail total domestication and control by human beings. Instead, each earthly place would be a home, or community, to be shared with other living and non-living things. The needs of both humans and non-humans would be dynamically balanced. If such a story can be rewritten or experienced, it would be the product of many new voices and would have a complex plot and a different ending. As in the corn mother origin story, women and the Earth, along with men, would be active agents. The new ending, however, will not come about if we simply read and reread the story into which we were born. The new story can be rewritten only through action.

NOTES

1. Roland Nelson, Penobscot, as recorded by Frank Speck, "Penobscot Tales and Religious Beliefs," *Journal of American Folklore* 48, no. 187 (January–March 1935): 1–107, on 75. This corn mother origin story is a variant on a number of eastern United States and Canadian transformative accounts, recorded from oral traditions, that attribute the origins of corn to a mythical corn mother, who produces corn from her body, grows old, and then instructs her lover or son how to plant and tend corn. The killing of the corn mother in most of the origin stories may symbolize a transition from gathering/hunting to active corn cultivation. The snake lover may be an influence from the Christian tradition or a more universal symbol of the renewal of life (snakes shed their skins) and/or the male sexual organ. On corn mother origin stories, see John Witthoft, *Green Corn Ceremonialism in the Eastern Woodlands* (Ann Arbor: University of Michigan Press, 1949), 77–85; Joe Nicholas, Malechite, Tobique Point, Canada, August 1910, as recorded by W.H. Mechling, *Malechite Tales* (Ottawa: Government Printing Bureau, 1914), 87–88; for the Passamaquoddy variant, see *Journal of American Folklore* 3 (1890): 214; for Creek and Natchez variants, see J.R. Swanton, "Myths and Tales of the Southeastern Indians," *Bulletin of the Bureau of American Ethnology* no. 88 (1929): 9–17; on Iroquois variants, see Jesse Cornplanter, *Legends of the Longhouse* (Philadelphia: J.B. Lippincott, 1938) and Arthur Parker, "Iroquois Use of Maize and Other Food Plants," *New York State Museum Bulletin* no. 144 (November 1, 1910): 36–39; Gudmund Hart, "The Corn Mother in America and Indonesia," *Anthropos* 46 (1951): 853–914. Examples of corn mother origin stories from the Southwest include the Pueblo emergence from the dark interior of the Earth into the light of the fourth world where Corn Mother plants Thought Woman's gift of corn. See Ramon Gutierrez, *When Jesus Came the Corn Mothers Went Away* (Stanford: Stanford University Press, 1991). For a discussion of the relationship of the corn mother to Mother Earth, see Sam Gill, *Mother Earth: An American Story* (Chicago: University of Chicago Press, 1987), 4, 125.

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2. On Great Plains environmental histories as progressive and declensionist plots, see William Cronon, "A Place for Stories: Nature, History and Narrative," *Journal of American History* 78 (March 1992): 1347–1376. The Indian and European origin stories can be interpreted from a variety of standpoints other than the declensionist and progressive narrative formats I have emphasized here (such as romance and satire). Additionally, the concepts of desert, wilderness, and garden are nuanced and elaborate motifs that change valences over time in ways I have not tried to deal with here.
3. *Holy Bible*, King James version, Genesis, Book 1. On the comic and tragic visions of the human, animal, vegetable, mineral, and unformed worlds, see Northrop Frye, *Fables of Identity* (New York: Harcourt Brace, 1963), 19–20. In the comic state, or vision, the human world is a community, the animal world consists of domesticated flocks and birds of peace, the vegetable world is a garden or park with trees, the mineral world is a city or temple with precious stones and starlit domes, and the unformed world is a river. In the tragic state or vision, the human world is an anarchy of individuals; the animal world is filled with beasts and birds of prey (such as wolves, vultures, and serpents); the vegetable world is a wilderness, desert, or sinister forest; the mineral world is filled with rocks and ruins; and the unformed world is a sea or flood. The plot of the tragedy moves from a better or comic state to a worse or tragic state; the comedy from an initial tragic state to a comic outcome. On history as narrative, see Hayden White, *Metahistory: The Historical Imagination in Nineteenth-Century Europe* (Baltimore: Johns Hopkins University Press, 1973); Hayden White, *Tropics of Discourse: Essays in Cultural Criticism* (Baltimore: Johns Hopkins University Press, 1978); Hayden White, *The Content of the Form: Narrative Discourse and Historical Representation* (Baltimore: Johns Hopkins University Press, 1987).
4. Benjamin Franklin, "Remarks Concerning the Savages of North America," in *Franklin's Wit and Folly: The Bagatelles*, edited by Richard E. Amacher (New Brunswick: Rutgers University Press, 1953), 89–98. Franklin's story is probably satirical rather than literal.
5. The concept of a recovery from the original Fall appears in the early modern period. See the *Oxford English Dictionary*, compact edition, vol. 2, 2447: The act of recovering oneself from a mishap, mistake, fall, etc. See Bishop Edward Stillingfleet, *Origines Sacrae* (London, 1662), II, i, sec. 1: "The conditions on which fallen man may expect a recovery." William Cowper, *Retirement* (1781), 138: "To ... search the themes, important above all Ourselves, and our recovery from our fall." See also Richard Eden, *The Decades of the Newe Worlde or West India* (1555), 168: "The recoverie of the kyngedome of Granata." The term "recovery" also embraced the idea of regaining a "natural" position after falling and a return to health after sickness. It acquired a legal meaning in the sense of gaining possession of property by a verdict or judgment of the court. In common recovery, an estate was transferred from one party to another. John Cowell, *The Interpreter* (1607), s.v. "recoverie": "A true recoverie is an actuall or reall recoverie of anything, or the value thereof by Judgement." Another meaning was the restoration of a person or thing to a healthy or normal condition, or a return to a higher or better state, including the reclamation of land. Anonymous, *Captives Bound in Chains ... the Misery of Graceless Sinners, and the Hope of Their Recovery by Christ* (1674); Bishop Joseph Buder, *The Analogy of Religion Natural and Revealed* (1736), II, 295: "Indeed neither Reason nor Analogy would lead us to think ... that the Interposition of Christ ... would be of that Efficacy for Recovery of the World, which Scripture teaches us it was." Joseph Gilbert, *The Christian Atonement* (1836), i, 24: "A modified system, which shall include the provision of means for recovery from a lapsed state." James Martineau, *Essays, Reviews, and Addresses* (1880–1891), II, 310: "He is fitting to be among the prophets of recovery, who may prepare for us a more wholesome future." John Henry Newman, *Historical Sketches* (1872–1873) II, 1, iii, 121: "The special work of his reign was the recovery of the soil."

6. On the Genesis 1, or priestly version (Genesis P), composed in the fifth century BC versus the Genesis 2, or Yahwist version (Genesis J), composed in the ninth or tenth century BC and their relationships to the environmental movement, see J. Baird Callicott, "Genesis Revisited: Muirian Musings on the Lynn White, Jr. Debate," *Environmental Review* 14, nos. 1–2 (Spring/Summer 1990): 65–92. Callicott argues that Lynn White, Jr. mixed the two versions in his famous article "The Historical Roots of Our Ecologic Crisis," *Science* 155 (1967): 1203. On the historical traditions behind the Genesis stories, see Artur Weiser, *The Old Testament: Its Formation and Development*, translated by Dorthea M. Barton (New York: Association Press, 1961).
7. John Prest, *The Garden of Eden: The Botanic Garden and the Recreation of Paradise* (New Haven: Yale University Press, 1981), 1–37; J.A. Phillips, *Eve: The History of an Idea* (San Francisco: Harper & Row, 1984); Francis Russell, *The World of Dürer* (New York: Time, 1967), 83, 109.
8. "Paradise" derives from the old Persian word for "enclosure" and in Greek and Latin takes on the meaning of "garden." Its meanings include heaven, a state of bliss, an enclosed garden or park, and the Garden of Eden. "Parousia" derives from the Latin *parere*, meaning to produce or bring forth. The Parousia is the idea of the End of the World, expressed as the hope set forth in the New Testament that "he shall come again to judge both the quick and the dead." See A.L. Moore, *The Parousia in the New Testament* (Leiden: E.J. Brill, 1966). I thank Anthony Chennells for bringing this concept to my attention. Capitalism and Protestantism were initially mutually reinforcing in their common hope of a future golden age. But as capitalism became more materialistic and worldly, it began to undercut the Church's parousia hope. Communism retained the idea of a future golden age in its concern for community and future direction (pp. 2–3). The parousia hope was a driving force behind the Church's missionary work in its early development and in the New World (p. 5). The age of glory was a gift of God; an acknowledgment of the future inbreaking of God (JHWH) into history (pp. 16, 17). "The scene of the future consumation is a radically transformed earth. The coming of this Kingdom was conceptualized as a sudden catastrophic moment, or as preceded by the Messianic kingdom, during which it was anticipated that progressive work would take place" (p. 20). "Concerning the central figure in the awaited End-drama there is considerable variation. In some visions the figure of Messiah is entirely absent. In such cases 'the kingdom was always represented as under the immediate sovereignty of God'" (p. 21). "The divine intervention in history was the manifestation of the Kingdom of God.... [T]his would involve a total transformation of the present situation, hence the picture of world renewal enhanced sometimes by the idea of an entirely supernatural realm" (pp. 25–26). "The fourth *Eclogue* of Virgil presents the hope of a 'golden age' but in fundamental contrast to apocalyptic expectation; although it is on a cosmic scale, it is the hope of revolution from within rather than of intervention from without" (p. 28).
9. Max Oelschlaeger, *The Idea of Wilderness: From Prehistory to the Age of Ecology* (New Haven: Yale University Press, 1991), 49–60.
10. Francis Bacon, "Novum Organum," in *Works*, 14 vols., edited by James Spedding, Robert Leslie Ellis, and Douglas Devon Heath (London: Longmans Green, 1870), vol. 4, 114–115, 247–248. See also Bacon's statement, "I mean (according to the practice in civil causes) in this great plea or suit granted by the divine favor and providence (whereby the human race seeks to recover its right over nature) to examine nature herself and the arts upon interrogatories." Bacon, "Preparative towards a Natural and Experimental History," *Works*, vol. 4, 263. William Leiss, *The Domination of Nature* (New York: George Braziller, 1972), 48–52; Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution*, 185–186; Charles Whitney, *Francis Bacon and Modernity* (New Haven: Yale University Press, 1986), 25.
11. Marshall Sahlins, *Culture and Practical Reason* (Chicago: University of Chicago Press, 1976), 53: "The development from a Hobbesian state of nature is the origin myth of Western capitalism."

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12. On the definition of natural resources, see John Yeats, *Natural History of Commerce* (London, 1870); 2; Thomas Hobbes, "Leviathan" (1651), in *English Works*, 11 vols. (reprint edition, Aslen: Scientia, 1966), vol. 3, 145, 158; John Locke, *Two Treatises of Government* (1690), edited by Peter Laslett (Cambridge: Cambridge University Press, 1960), Second Treatise, Chapter 5, secs. 28, 32, 35, 37, 46, 48.
13. The Fall from Eden may be interpreted (as can the corn mother origin story; see note 1) as representing a transition from gathering/hunting to agriculture. In the Garden of Eden, Adam and Eve pick the fruits of the trees without having to labour in the earth (Genesis 1: 29–30; Genesis 2: 9). After the Fall they had to till the ground "in the sweat of thy face" and eat "the herb of the field" (Genesis 3: 18, 19, 23). In Genesis 4, Abel, "keeper of sheep," is the pastoralist, while Cain, "tiller of the ground," is the farmer. Although God accepted Abel's lamb as a first fruit, he did not accept Cain's offering. Cain's killing of Abel may represent the ascendancy of farming over pastoralism. Agriculture requires more intensive labour than either pastoralism or gathering. See Oelschlaeger, *The Idea of Wilderness*; Callicott, "Genesis Revisited," 81.
14. Victor Rotenberg, "The Lapsarian Moment," mss. Hesiod, "Works and Days," in *Theogony and Works and Days*, translated by M.L. West (Oxford: Oxford University Press, 1988), 40.
15. Publius Ovid, *Metamorphoses* (written AD 7), translated by Rolfe Humphries (Bloomington: Indiana University Press, 1955), Book 1, p. 6, lines 100–111.
16. On the meanings of nature and nation and the following interpretation of Virgil, see Kenneth Olwig, *Nature's Ideological Landscape* (London: George Allen and Unwin, 1984), 3–9. In the *Eclogues*, Virgil characterized the pastoral landscape as the grazing of tame animals on grassy hillsides. Human labour domesticated animals, transformed the forest into meadows, and dammed springs to form pools for watering livestock. But the shepherd was relatively passive, watching flocks while reclining in the shade of a remnant forest tree.
17. Olwig, *Nature's Ideological Landscape*, 6. Agriculture is initiated by Jove, who "endowed that cursed thing the snake with venom and the wolf with thirst for blood." "Toil ... taught men the use and method of the plough." Agricultural instruments were hammered out by the use of fire, becoming "weapons hardy rustics need ere they can plow or sow the crop to come." Virgil, *Georgics*, I, 151–152, as quoted in Olwig, *Nature's Ideological Landscape*, 6.
18. Olwig, *Nature's Ideological Landscape*, 3–9; Virgil, *Georgics*, II (1946), 106–107; Virgil, *Eclogues*, IV, 4–34. Virgil's temporal and spatial stages prefigure Frederick Jackson Turner's frontier stages and Johann Heinrich von Thünen's rings, discussed by William Cronon in the conversion of hinterland resources (first nature) into commodities (second nature) in Chicago. See William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: Norton, 1991), 46–54.
19. Lucretius, *Of the Nature of Things*, translated by William Ellery Leonard (New York: E.P. Dutton, 1950), Book V, lines 922–1008. Lucretius's image of "the state of nature was strikingly similar to that of Thomas Hobbes in *Leviathan*. Lucretius wrote that in the early days, "men led a life after the roving habit of wild beasts." They chased and ate wild animals and were in turn hunted and devoured by them. In the state of nature, they "huddled in groves, and mountaincaves, and woods" without any regard for "the general good" and did not "know to use in common any customs, any laws." Just as Hobbes characterized life before civil law as "nasty, brutish, and short," so Lucretius wrote that "the clans of savage beasts" would make "sleep-time horrible for those poor wretches." Men were "snatched upon and gulped by fangs," while those who escaped "with bone and body bitten, shrieked," as the "writhing pangs took them from life." In a time before agricultural plenty, starvation was rampant as "lack of food gave o'er men's fainting limbs to dissolution." Procreation, for Lucretius, was likewise beastlike and brutal. Men took women "with impetuous fury and insatiate lust" or bribed them with berries and fruit. When finally women moved "into one dwelling place" with men, "the human race began to soften," as they saw "an offspring born from out themselves." Neighbours intervened on behalf of women and children and urged compassion for the weak.

20. Lucretius, *Of the Nature of Things*, Book V, lines 1135–1185: "So next some wiser heads instructed men to found the magisterial office, and did frame codes that they might consent to follow laws." ... "For humankind, o'er wearied with a life fostered by force ... of its own free will yielded to laws and strictest codes." Because "each hand made ready in its wrath to take a vengeance fiercer than by man's fair laws," people voluntarily submitted to "fear of punishment."
21. Lucretius, *Of the Nature of Things*, Book VI, lines 1136–1284. "For now no longer men did mightily esteem the old Divine, the worship of the gods: the woe at hand did overmaster."
22. Lucretius, *Of the Nature of Things*, Book V, lines 811–870.
23. On Edenic imagery in American history, see R.W.B. Lewis, *The American Adam: Innocence, Tragedy, and Tradition in the Nineteenth Century* (Chicago: University of Chicago Press, 1955); David Noble, *The Eternal Adam and the New World Garden: The Central Myth in the American Novel since 1830* (New York: George Braziller, 1968); David Watt, *The Fall into Eden: Landscape and Imagination in California* (New York: Cambridge University Press, 1986); Cecelia Tichi, *New World, New Earth: Environmental Reform in American Literature from the Puritans through Whitman* (New Haven: Yale University Press, 1979).
24. Vladimir Propp, "Morphology of the Folktale," *International Journal of American Linguistics* 24, no. 4 (October 1958): 46–48. Roland Barthes, "The Struggle with the Angel," *Image, Music, Text*, translated by Stephen Heath (New York: Noonday Press, 1977), 139–141.
25. Quoted in Peter N. Carroll, *Puritanism and the Wilderness, 1629–1700* (New York: Columbia University Press, 1969), 13–14.
26. William Bradford, *History of Plymouth Plantation, 1620–1647*, 2 vols., edited by Worthington C. Ford (Boston: Published for the Massachusetts Historical Society by Houghton Mifflin Co., 1912).
27. Charles Morton, *Compendium Physicae*, from the 1697 manuscript copy (Boston: Colonial Society of Massachusetts Publications, 1940), vol. 33, xi, xxix, xxiii, xxxi; Nathaniel Ames, *An Astronomical Diary or Almanac* (Boston: J. Draper, 1758), endpapers.
28. Robert Beverley, *The History and Present State of Virginia* (London: R. Parker, 1705), 246–248.
29. Matthew Baigell, *Thomas Cole* (New York: Watson Guptill, 1981), plates 15, 16. On Cole's use of Eden as metaphor, see Henry Adams, "The American Land Inspired Cole's Prescient Visions," *Smithsonian* 25, no. 2 (May 1994): 99–107.
30. Baigell, *Thomas Cole*, plates 10, 15.
31. Ralph Waldo Emerson, "The Young American," *The Dial* 4 (April 1844): 484–507, quotation on 489, 491.
32. Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (New York: Oxford University Press, 1964).
33. John Winthrop, "Winthrop's Conclusions for the Plantation in New England," *Old South Leaflets* no. 50 (1629) (Boston: Directors of the Old South Work, 1897), no. 50: 4–5; John Quincy Adams, *Congressional Globe* 29, no. 1 (1846): 339–342; Thomas Hart Benton, ibid., 917–918.
34. Reverend Dwinell, quoted in John Todd, *The Sunset Land, or the Great Pacific Slope* (Boston: Lee and Shepard, 1870), 252; Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth* (Cambridge: Harvard University Press, 1950); Marx, *The Machine in the Garden*.
35. Frederick Jackson Turner, "The Significance of the Frontier in American History," American Historical Association, Annual Report for the Year 1893 (Washington: 1894), 199–227.
36. Francis Paul Prucha, *The Indians in American Society* (Berkeley: University of California Press, 1985), quotations on 7, 10.
37. Prucha, *Indians in American Society*, quotation on 12.
38. Prucha, *Indians in American Society*, 14–20; Lloyd Burton, *American Indian Water Rights and the Limits of the Law* (Lawrence: University of Kansas Press, 1991), 6–34; Carolyn Merchant, *Ecological Revolutions: Nature, Gender, and Science in New England* (Chapel Hill: University of

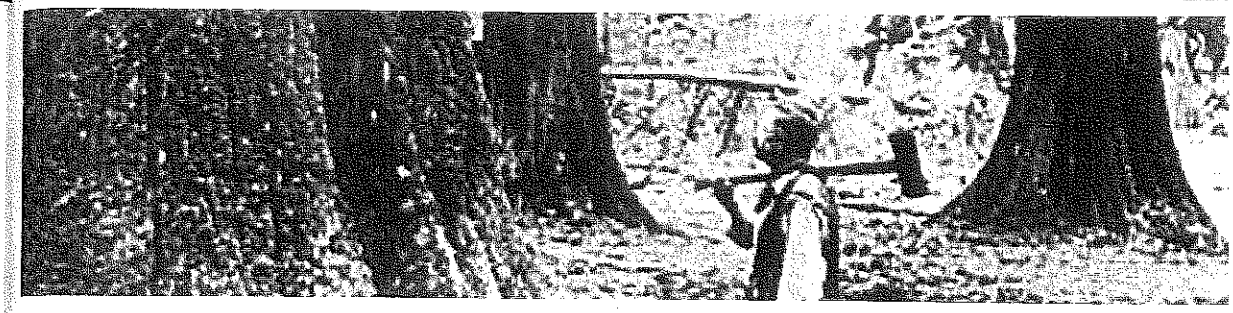
North Carolina Press, 1989), chapters 2 and 3; William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983); Richard White, *The Roots of Dependency: Subsistence, Environment, and Social Change among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1983); "Wilderness Act," 1964.

39. Chief Luther Standing Bear, *Land of the Spotted Eagle* (Boston: Houghton Mifflin, 1933), xix. On the ethnocentricity of wilderness values, see J. Baird Callicott, "The Wilderness Idea Revisited: The Sustainable Development Alternative," *The Environmental Professional* 13 (1991): 236–245.
40. Neal Salisbury, "Red Puritans: The 'Praying Indians' of Massachusetts Bay and John Eliot," *William and Mary Quarterly*, 3rd ser. 31, no. 1 (1974): 27–54; William Simmons, "Conversion from Indian to Puritan," *New England Quarterly* 52, no. 2 (1979): 197–218.
41. Franklin, "Remarks Concerning the Savages of North America," 91.
42. On images and metaphors of nature as female in American history, see Annette Kolodny, *The Lay of the Land: Metaphor as Experience and History in American Life and Letters* (Chapel Hill: University of North Carolina Press, 1975); Annette Kolodny, *The Land before Her: Fantasy and Experience of the American Frontier, 1630–1860* (Chapel Hill: University of North Carolina Press, 1984); Vera Norwood and Janice Monk, eds., *The Desert Is No Lady: Southwestern Landscapes in Women's Writing and Art* (New Haven: Yale University Press, 1987); Vera Norwood, *Made from This Earth: American Women and Nature* (Chapel Hill: University of North Carolina Press, 1993); Sam Gill, *Mother Earth* (Chicago: University of Chicago Press, 1987).
43. Thomas Morton, *New English Canaan*, in *Tracts and Other Papers ...*, edited by Peter Force (Washington: 1838), vol. 2, 10.
44. Henry Colman, "Address before the Hampshire, Franklin and Hampden Agricultural Society Delivered in Greenfield, Oct. 23, 1833" (Greenfield: Phelps and Ingersoll, 1833), 5–6, 15, 27.
45. Frank Norris, *The Octopus, a Story of California* (New York: Penguin Books, 1986; originally published 1901), 127. I thank David Igler for bringing these passages to my attention.
46. Norris, *Octopus*, 127.
47. Norris, *Octopus*, 130–131.
48. *Scribner's Monthly* 21, no. 1 (November 1880): 61. On the association of women with civilization and culture in nineteenth-century America, see Christopher Lasch, *The New Radicalism in America, 1889–1963* (New York: W.W. Norton, 1965), 65; Nancy Woloch, *Women and the American Experience* (New York: Knopf, 1984), Chapter 6; Merchant, *Ecological Revolutions*, Chapter 7.
49. J. Hector St. John de Crévecoeur, "What is an American?" *Letters from an American Farmer* (New York: E.P. Dutton, 1957; originally published 1782), 39–43.
50. Richard F. Burton, *The City of the Saints and across the Rocky Mountains to California* (1861) (New York: Knopf, 1963), 72.
51. See also Roderick Nash, *Wilderness and the American Mind*, 3rd ed. (New Haven: Yale University Press, 1982); Richard Slotkin, *Regeneration through Violence: The Mythology of the Frontier* (Middletown: Wesleyan University Press, 1973); Richard Slotkin, *Gunfighter Nation: The Myth of the Frontier in Twentieth-Century America* (New York: Atheneum, 1992).
52. On the Greek and Renaissance distinction between *Natura naturans* and *Natura naturata*, see Eustace M.W. Tillyard, *The Elizabethan World Picture* (New York: Random House Vintage, 1959), 42: "This giving a soul to nature—nature, that is, in the sense of *natura naturans*, the creative force, not of *natura naturata*, the natural creation—was a mildy unorthodox addition to the spiritual or intellectual beings.... Hooker, orthodox as usual, is explicit on this matter. [Nature] cannot be allowed a will of her own.... She is not even an agent ... [but] is the direct and involuntary tool of God himself." See also Whitney, *Bacon and Modernity*, 123: "[T]he extreme dehumanization of [nature by] the Baconian scientist ... is linked not simply to a complementary dehumanization of the feminine object of study, but to a somewhat

anachronistic return to a more robust feminine image of nature as *natura naturans*." Spinoza also used the two terms, but with rather different meanings than implied here. See Baruch Spinoza, *Spinoza Selections*, edited by John Wild (New York: Charles Scribner's Sons, 1930), 80–82; Harry A. Wolfson, *The Philosophy of Spinoza*, 2 vols. (New York: Meridian, 1958), vol. I, 253–255.

53. Frank Norris, *The Pit, a Story of Chicago* (1903) (New York: Grove Press, 1956).
54. William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W.W. Norton, 1991). Cronon quotes the passage below from *The Pit* on the page preceding his "Prologue."
55. Norris, *The Pit*, 62.
56. Norris, *The Pit*, 60–63.
57. On Marx's concept of the endowment of money with organic, living properties and its application among the Indians of the Cauca Valley in Colombia, see Michael Taussig, "The Genesis of Capitalism amongst a South American Peasantry: Devil's Labor and the Baptism of Money," *Comparative Studies in Society and History* 19 (April 1977): 130–153.
58. Norris, *The Pit*, 374.
59. Nash, *Wilderness and the American Mind*.
60. Carol P. MacCormack, "Nature, Culture, and Gender," in *Nature, Culture, and Gender*, edited by Carol MacCormack and Marilyn Strathern (Cambridge: Cambridge University Press, 1980), 6–7; Sherry Ortner, "Is Female to Male as Nature Is to Culture?" in *Woman, Culture, and Society*, edited by Michelle Rosaldo and Louise Lamphere (Stanford: Stanford University Press, 1974), 67–87.
61. Philip Elmer-Dewitt, "Fried Gene Tomatoes," *Time* (May 30, 1994): 54–55; Richard Keller Simon, "The Formal Garden in the Age of Consumer Culture: A Reading of the Twentieth-Century Shopping Mall," in *Mapping American Culture*, edited by Wayne Franklin and Michael Steiner (Iowa City: University of Iowa Press, 1992), 231–250.
62. Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment* (1944) (New York: Continuum, 1993), quotations on 3, 7, 9.
63. Maria Gimbutas, *The Goddesses and Gods of Old Europe, 6500–3500 BC* (Berkeley: University of California Press, 1982); Merlin Stone, *When God Was a Woman* (New York: Harcourt Brace Jovanovich, 1976); Riane Eisler, *The Chalice and the Blade* (San Francisco: Harper & Row, 1988); Elinor Gadon, *The Once and Future Goddess* (San Francisco: Harper & Row, 1989); Monica Sjöö and Barbara Mor, *The Great Cosmic Mother: Rediscovering the Religion of the Earth* (San Francisco: Harper & Row, 1987); Pamela Berger, *The Goddess Obscured: The Transformation of the Grain Protectress from Goddess to Saint* (Boston: Beacon Press, 1985). On cultural ecofeminism, see some of the essays in *Reweaving the World: The Emergence of Ecofeminism*, edited by Irene Diamond and Gloria Orenstein (San Francisco: Sierra Club Books, 1990).
64. Londa Schiebinger, *The Mind Has No Sex? Women in the Origins of Modern Science* (Cambridge: Harvard University Press, 1989); Evelyn Fox Keller, *Reflections on Gender and Science* (New Haven: Yale University Press, 1985).
65. Examples include Oelschlaeger, *The Idea of Wilderness*; Donald Worster, *The Wealth of Nature* (New York: Oxford University Press, 1993); Barry Commoner, *The Closing Circle: Nature, Man, and Technology* (New York: Knopf, 1971).
66. Bill McKibben, *The End of Nature* (New York: Random House, 1989). For a critique, see Tom Athanasiou, "U.S. Politics and Global Warming" (Westfield: Open Magazine Pamphlet Series, 1991).
67. Carolyn Merchant, *Radical Ecology: The Search for a Livable World* (New York: Routledge, 1992).
68. Alan Hastings, Carole L. Hin, Stephen Ellner, Peter Turchin, and H. Charles J. Godfray, "Chaos in Ecology: Is Mother Nature a Strange Attractor?" *American Review of Ecological Systems* 24, no. 1 (1993): 1–33; N. Katherine Hayles, "Gender Encoding in Fluid Mechanics: Masculine Channels

and Feminine Flows," *Differences: A Journal of Feminist Cultural Studies* 4, no. 2 (1992): 16–44; N. Katherine Hayles, *Chaos Bound: Orderly Disorder in Contemporary Literature and Science* (Ithaca: Cornell University Press, 1990); N. Katherine Hayles, ed., *Chaos and Order: Complex Dynamics in Literature and Science* (Chicago: University of Chicago Press, 1991); Daniel Botkin, *Discordant Harmonies: A New Ecology for the Twenty-First Century* (New York: Oxford University Press, 1990); James Gleick, *Chaos: The Making of a New Science* (New York: Viking, 1987); Edward Lorenz, *The Essence of Chaos* (Seattle: University of Washington Press, 1993).



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