Changes in the Land

INTRODUCTION

BRIEF BIOGRAPHY OF WILLIAM CRONON

William Cronon is an environmental historian who holds a BA from the University of Wisconsin-Madison; MA, MPhil, and PhD degrees from Yale; and a DPhil (second PhD) from Oxford. *Changes to the Land* began as a seminar paper he wrote as a graduate student at Yale. It was published in 1983 and was Cronon's first book. His first academic position was as a professor of history at Yale, where he received tenure. In 1991, he published his second book, *Nature's Metropolis: Chicago and the Great West*, and the following year he coedited a volume entitled *Under an Open Sky: Rethinking America's Western Past*. He left Yale after 10 years in 1993, taking a professorship at the University of Wisconsin-Madison, where he still works today. In 1995 he published another book, *Uncommon Ground: Rethinking the Human Place in Nature*. He is the recipient of Guggenheim and MacArthur Fellowships along with many other honors and awards.

HISTORICAL CONTEXT

Although it is a work of history, readers may be surprised to find that few historical "events" in the traditional sense appear within the pages of *Changes to the Land*. These events tend to be mentioned in the background of the main narrative and include the epidemics of European disease that struck Native populations beginning in 1616, the founding of the Massachusetts Bay Colony in 1629, the massacre of the Pequots in 1637, the assassination of the Narragansett *sachem* Miantonomo in 1643, and King Philip's War of 1675–1678. Part of Cronon's aim is to challenge what readers imagine a "historical event" to be. The elimination of wild animals such as the beaver, for example, is a key historical event in the book even though the main subjects are not human.

RELATED LITERARY WORKS

Changes in the Land was one of the books that helped found the field of environmental history, which is now a rich and important discipline. Other significant works of environmental history include Neil Robert's *The Holocene*, Mark Elvin's *The Retreat of the Elephants*, and John Aberth's *An Environmental History of the Middle Ages*. Books such as Andrew C. Isenberg's *The Destruction of the Bison* and Ted Steinberg's *Down to Earth: Nature's Role in American History* are specifically environmental histories of the U.S. Like *Changes in the Land*, Carolyn Merchant's *The Death of Nature: Women, Ecology, and the Scientific Revolution* contains a meta-history of the field of ecology. Greta LaFleur's *The Natural History of Sexuality in Early America*, meanwhile, provides an account of understandings of sex within the field of 18th-century American natural history.

KEY FACTS

- **Full Title:** Changes in the Land: Indians, Colonists, and the Ecology of New England
- **When Written:** 1979–1983
- **Where Written:** New Haven, Connecticut
- **When Published:** 1983
- **Literary Period:** Postmodern
- **Genre:** Environmental History
- **Setting:** Colonial New England, 1600–1800
- **Point of View:** Third Person

EXTRA CREDIT

Under Fire. William Cronon has been attacked by Republicans as a result of his criticisms of Wisconsin Governor Scott Walker's assaults on unions. Cronon pointed out that such attacks are an infringement on his freedom of speech.

Barking up the Wrong Tree. After writing an essay criticizing the concept of the "wilderness" in *The New York Times*, Cronon was invited to join the council of the Wilderness Society.

PLOT SUMMARY

Changes in the Land is "an ecological history of colonial New England." The book's author, William Cronon, argues that the New England landscape was drastically transformed during the 17th and 18th centuries. By focusing on ecological history, it is possible to learn more about human history.

In 1855, Henry David Thoreau compared the landscape around his home in Concord, Massachusetts, to what natural historians of the 17th century recorded, and he lamented the change that had evidently occurred. He was particularly struck by the depletion of animal and plant species. Early settlers in New England had been astonished by the fertility and abundance of the landscape.

Cronon explains that ecological history requires its own particular set of evidence, including the subjective observations of natural historians and other observers, colonial laws, town records, and ecological phenomena such as fossil pollen and tree rings. None of these forms of evidence were complete or unbiased, but together they form a useful picture. It is also important not to assume that without human

intervention, environments always stay the same. In reality, ecological systems are in a constant state of change. Furthermore, Native people had been living in what is currently the U.S. for 10,000 years before European settlers arrived; thus, the landscape that settlers encountered had already been altered by human activity. Moreover, the way that any given human population alters their environment is always subject to change over time.

When European colonizers arrived, they were overwhelmed by what they understood as a land of "profits." Indeed, part of what was distinctive about the colonizers' perspective was that they saw the landscape and its resources in terms of commodities, meaning goods that had economic value. This way of thinking tended to deemphasize the web of ecological relationships in which every part of the natural world was situated.

It is true that precolonial New England was a land of extraordinary biodiversity, fertility, and abundance. There was a huge array of wild animals as well as rich forests. Yet the landscape had not been static prior to European arrival. Over 12,000 years prior, the region had been a "glacial tundra" that changed gradually into the land that the Europeans encountered. The seasons in New England were not dissimilar to those in Europe, although there was a greater contrast between summer and winter. However, some early colonizers failed to realize this and mistakenly assumed that the lush and temperate spring and summer conditions lasted year-round. Some even ended up starving to death in winter as a result of this miscalculation.

Native people's lives were completely structured around the cycle of the seasons. Part of the way this manifested was through being mobile and moving their villages from place to place according to seasonal change. They also pursued different activities at different times of year. Northern indigenous communities fished in the spring and summer; gathered nuts, berries, and wild plants in summer; and hunted mammals such as **beaver**, caribou, and bear during the winter. Communities in Southern New England practiced agriculture, but they still moved their fields fairly regularly to avoid soil exhaustion. They would grow several crops on the same field, combining kidney beans, squash, and corn. Women tended to the crops and did other tasks that were compatible with taking care of children at the same time. Native communities practiced controlled burning of the forest in a way that cleared underwood and ultimately promoted the forest's health and fertility. Overall, their agricultural practices maintained the "mosaic effect" of biodiversity.

Colonizers criticized the gendered division of labor in indigenous communities—because women tended to the fields, colonizers falsely claimed that it was women who did all the work. Meanwhile, indigenous people were baffled by the fact that European women appeared to do nothing. Colonizers argued that because Native people supposedly did not cultivate the land property, colonizers had the right to seize it from them. The two groups of people had conflicting understandings of property ownership and ultimately the colonizers only respected the authority of their own system.

For Native people, a village "owned" the land it inhabited in the sense that it had the right to use it and this right was respected by others (such as neighboring villages and tribes). Land was never sold but instead exchanged in arrangements that were "diplomatic" rather than "economic." Personal possessions were also limited to objects that people had made or which they used and objects tended to be shared rather than kept for exclusive personal use. Similarly, animals were only "owned" at the moment in which they were killed. Native people believed that they had property rights to the product of the land, but as such these rights were flexible and shifted with the seasons. There was no context in which a person or group had permanent, exclusive rights to an area of land.

Colonizers discounted the indigenous system of property rights as "not real." According to European understanding, owning something meant having exclusive private access to it forever. As land ownership was more and more frequently adjudicated by the English monarch, colonizers came to act as if Native people only had rights to land if this had been granted by the Crown. Over time, it became more common for land to be divided up according to abstract geographic boundaries rather than suitability for a particular agricultural purpose. Colonizers characterized Native people as lazy and "impoverished" for not cultivating the land in order to maximize profit, and they used this as an excuse to seize land from Native communities.

Particularly during the early colonial period, indigenous people were very willing to engage in trade with colonizers, mostly exchanging animal fur and skins for fabric, weaponry, tools, and decorative objects. During these interactions, Europeans passed on microorganisms causing many diseases against which Native people had no immunity. This had a devastating impact on the Native population: in many villages, up to 90 percent of inhabitants died. This mass death had a chaotic impact on indigenous social and political life and left surviving communities highly vulnerable. For a while, colonizers encouraged the use of wampum as currency in trade, but over time it lost value and many Native people found themselves destitute. Additionally, they had become dependent upon the very markets that were now excluding them. Now actually impoverished and unable to continue their preexisting way of life, many communities resorted to selling their land to survive. Animals such as the beaver largely died out as a result of overhunting.

Colonization also led to mass deforestation. Colonizers lumbered as if trees were an infinite resource, engaging in highly wasteful practices in order to access the most high-value timber. Even more devastating for the forest than lumbering

was the expansion of farming, which led to huge areas of forest being hastily cleared with fire. The destruction of the forests had many powerful side effects, completing changing the ecosystem and climate of New England.

Although there were some similarities between Native and European agricultural practices, the two groups of people had starkly different ways of treating animals. Whereas Native people hunted wild animals, Europeans kept domestic grazing animals. Livestock—and especially pigs—caused a huge amount of conflict in colonial New England due to the problem of animals eating other people's crops. The nuisance caused by livestock led to the widespread erection of **fences**. Eventually, different animal species started being kept inside their own respective enclosures. Fences also had the effect of visually marking the separation between different areas of private land. Grazing animals had a fairly destructive impact on the environment and were a leading factor in intensifying soil exhaustion. Facing depleted soil, colonizers took to using fish or ash from burned trees as moisturizing agents, which was both wasteful and insufficient for promoting sustainable fertility. Europeans had also brought over weeds and pests that caused significant problems to New England ecosystems.

It was the 19th century and the Industrial Revolution that brought the greatest change to the New England landscape. However, it is important not to let this accelerated change distract from the fact that the landscape was also drastically transformed during the colonial period. By 1800, New England had been turned into "a world of fields and fences." At that point, the Native population had slid to a fraction of what it once was, while there was an enormous influx of settlers. It is easy to attribute all the environmental change that occurred during the colonial period to the capitalist economic system brought over by European colonizers, and indeed, this was by far the single greatest factor that created change during this time. In response to colonization, Native people fought back, tried to protect their existing ways of life, and attempted to adapt in order to have a chance at survival. Ultimately, they were not able to stop the enormous and often highly destructive changes that colonization brought to the landscape.

CHARACTERS

MAJOR CHARACTERS

John Locke – Locke was a 17th-century English philosopher who was a key figure in the Enlightenment and the "Father of Liberalism." In his book *Two Treaties of Government*, he compared indigenous and European ways of life and concluded that indigenous people did not have a right to their land because they supposedly did not cultivate it properly.

MINOR CHARACTERS

William Cronon – Cronon is the author of *Changes in the Land*. Cronon began writing the book while a PhD student in Yale's history department. He went onto become a highly important historian credited with helping inaugurate the field of environmental history.

Henry David Thoreau – Thoreau was a 19th-century American writer and philosopher and one of the key figures of the Transcendentalist movement. He wrote the famous book *Walden Pond*, about his time spent living and contemplating nature. He lived in Concord, Massachusetts and was an environmentalist with a keen interest in ecology.

William Wood – Wood was an English traveler who wrote a book entitled *New England's Prospect* in 1633.

Edward Johnson – Johnson was a colonial historian.

John Winthrop – Winthrop was an English colonizer who was one of the founders of the Massachusetts Bay Colony. His idea that there were two forms of land ownership—natural and civil—helped justify and intensify the colonizers' seizure of indigenous land.

Miantonomo – Miantonomo was a Narragansett sachem who called for "pan-Indian unity" as the basis for political resistance against European colonizers. He was murdered by colonizers in 1643.

TERMS

Sachem – The chief or leader of a village of indigenous people in northeast North America. Sachems would act as representatives of their villages, acting on behalf of—and in the interests of—everyone in the village.

Wampum – Wampum (originally *wampumpeag*) is a bead that certain indigenous populations in New England made from shells. These beads had profound significance in indigenous cultures, bestowing wealth and prestige. Once European colonizers arrived, wampum was used as currency in trade. However, over time, it lost value within colonial society and was eventually abandoned as a currency.

Girdling – Girdling is a system of clearing the forest that involves stripping bark off a tree to gradually kill it, letting the tree fall, and burning it.

THEMES

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NATURAL VS. UNNATURAL CHANGE

In *Changes in the Land*, Cronon examines the enormous changes that the New England landscape underwent during the American colonial period while also reminding readers that the environment is necessarily *always* changing. Natural change occurs at different timescales—from the annual cycle of the seasons to the much more gradual change that occurs across different epochs of time—so it is mistaken to believe that the new England landscape was static before the arrival of European settlers. Cronon argues against the idea that the Native people who lived in New England for many hundreds of years before the arrival of European invaders didn't change the land. At the same time, he emphasizes that European settlers introduced the most sudden and extreme changes the landscape had ever encountered. In this sense, Cronon challenges the idea that there is a clear binary between natural and unnatural change, even as he also highlights the importance of remembering that many of the changes to the North American landscape during the American colonial period would never have occurred without "unnatural" human intervention.

Early in the book, Cronon emphasizes that prior to the arrival of European colonizers, the New England landscape had already been undergoing change—both natural and unnatural. This is a key element of Cronon's argument, as prior to the publication of *Changes in the Land*, few historians acknowledged that the North American landscape was subject to change *before* the arrival of Europeans. At the same time, Cronon's description of the changes that preceded the European invasion highlight that these changes were either completely natural (meaning they were not caused by human activity whatsoever) or were low-impact and sustainable, the result of indigenous people's more harmonious relation to their environment. Cronon points out that much of the change that occurred in the New England landscape prior to colonization was entirely natural and took place over such a long period of time that any change not have been noticeable within any human lifetime. He points out that "The period during which Indians had inhabited the area had seen climactic warming transform southern New England from the glacial tundra of 12,500 years ago to a series of forests […]." This was, of course, a drastic change—but it was both entirely natural, and it occurred over such a long period that it would not have seemed significant to any animal or human who lived within this period.

Cronon also identifies the changes that Native people made to the New England landscape before European colonizers arrived. He points out that these changes tended to be fairly in sync with natural forms of change and far less impactful than the changes that would be made by Europeans. At the same time, he argues that across different cultures, "the human tendency was to systematize the patchwork and impose a new regular pattern on it." Indigenous people imposed such order even if they did so to a far lesser degree than Europeans. For example, they engaged in sustainable cycles of forest burning, a practice that ultimately kept the forest healthy and fertile: "It increased the rate at which forest nutrients were recycled into the soil, so that grasses, shrubs, and nonwoody plants tended to grow more luxuriantly following a fire than they had before […] burning also tended to destroy plant diseases and pests, not to mention the fleas which inevitably became abundant around Indian settlements." This was in some ways an "unnatural" change, but one that promoted sustainable, natural abundance. The forms of "unnatural" change enacted by indigenous people were a stark contrast to those imposed by European settlers. Although there were some similarities between the ways in which the two communities changed the environment, Europeans generally altered the land in such an intense, accelerated, and unsustainable fashion that the overall effect was quite different.

Whereas Native people tended to change the land in a way that was generally in sync with the land itself, Europeans instilled changes that radically disrupted the natural cycles of the landscape, thereby changing it forever. Like indigenous people, European colonizers also practiced forest burning (indeed, this was a tactic that they picked up from the land's Native inhabitants). However, whereas the Native practice of forest burning enhanced the landscape's natural fertility and abundance, the way in which Europeans burned forests destroyed the landscape. Native burning practices tended to only target weeds and undergrowth, thereby making the overall forest healthier, but European burning was straightforwardly destructive and led to permanent deforestation. Although both types of forest burning were in some ways "unnatural," the fact that indigenous people's engagement in this practice was more in sync with the natural rhythms of the landscape meant that it didn't change the land in an artificial or extreme manner. Moreover, colonizers also altered the landscape in ways that took it much further way from its natural state. These included erecting **fences**, planting crops in monocultural fields, and keeping domesticated grazing animals. All of these practices had (either direct or indirect) negative effects on the environment by throwing off its natural systems and cycles in an extreme, artificial manner.

Overall, while Cronon shows that it is often difficult to draw precise distinctions between natural and unnatural change, he also emphasizes the importance of acknowledging that most of the change that occurred within the New England landscape had an unnatural cause: European colonization. Indeed, Cronon highlights that some of these unnatural changes—like systematic deforestation—went on to stimulate long-term shifts (such as climate change) that might initially appear to be natural but were actually caused by artificial alterations to the landscape.

SYSTEMS AND INTERDEPENDENCE

In *Changes in the Land*, Cronon emphasizes that environmental history is inevitably a study of interdependent systems. Nature works as a system with many parts—hence the word "ecosystem"—and none of these parts can be properly understood in isolation without looking to how they interact with the rest of the system. Early in the book, Cronon raises the rhetorical question: "Are human beings inside or outside their systems?" The resounding answer found in the book is that humans are very much *inside* their systems (namely environmental systems, but also social communities, political economies, and ideologies). At the same time, however, Cronon shows that not everyone takes this view. In particular, while indigenous people in the American colonial period tended to have a keen understanding of the way in which they were interdependent with their ecosystem, European colonizers tended to think of themselves as individuals who had sovereignty and control over their environment. Cronon argues that this point of view was not only factually inaccurate, but that it led settlers to have a destructive impact on the landscape, even when they did not necessarily intend to.

Cronon makes a convincing case for the interdependence of all things through his analysis of the colonial New England landscape. As he writes early on the book, "The pig was not merely a pig but a creature bound among other things to the **fence**, the dandelion, and a very special definition of property." Crucially, this shows how one element of the natural world—in this case, a pig—is both part of an ecosystem *and* part of a variety of human systems that must be incorporated into a comprehensive understanding of the animal. One cannot understand the pigs of colonial New England without understanding the plants they ate (e.g., dandelions) and the way they were enclosed (fences). Moreover, pigs were not just part of the natural landscape but also the economy. As Cronon shows in the book, European colonizers had a markedly different understanding of their own relation to animals than Native people in this regard: Europeans viewed farm animals as property that belonged to a person like any other possession, whereas Native people believed that an animal could only "belong" to someone at the point at which it was killed. Depending on whose stewardship they were under, pigs were inextricably tied to one of these different concepts of ownership—and the political and economic systems to which they belonged.

One of the main arguments Cronon makes in the book is that while Native people had a keen understanding of the way in which they were part of—and interdependent with—their ecosystem, European colonizers tended to be in denial of this reality. Colonizers farmed the land in aggressive, destructive ways, leading to the permanent problems of deforestation and soil exhaustion. Crucially, they did so because they didn't understand the ways in which they were dependent on the land, which was a delicate ecosystem that could easily be thrown off by overly intense human intervention. Yet while colonizers may have liked to imagine themselves as masters of the landscape, there were many ways in which they were forced to confront the reality that this was not the case. Cronon argues, for example, that "Europeans as well as Indians were inextricably bound to the wheel of the seasons." He also shows the ways in which European colonizers altered the ecosystem with inadvertent negative results. For example, their intensive farming techniques contributed to the rise of a new crop of pests: "By using their animals and ploughs to create more extensive areas of cropland than the Indians had done, colonists unintentionally created habitats which many organisms found quite attractive." These organisms included the Hessian fly and black stem rust, both of which had a highly destructive impact on colonizers' lives and agricultural practices.

Perhaps the main message of the book is that whether people like it or not, they are part of various systems which are interdependent. This is a significant revision of the settler narrative of the American colonial period, which often emphasizes the sovereignty and supremacy of settlers over their environment. While the actions of settlers did indeed change the environment in an irrevocable manner, this was often not in the way that settlers actually intended, which proves that only an understanding of ecological interdependence will allow people to live in successful harmony with their environment. By the time settlers began to properly understand this truth (which was a major tenet of Native belief systems), it was often too late.

PROPERTY OWNERSHIP, COMMODITIES, AND PROFIT

Cronon argues that in order to understand the ecological shifts that occurred in New England during the American colonial period, it is necessary to examine the social, political, and cultural differences between Native American and European peoples. He argues that the most important of these cultural differences lie in the socioeconomic systems used by the two groups. Crucially, Europeans practiced an early form of capitalism, meaning that they believed land, plants, and animals could be owned as property. Moreover, they viewed the products of the land as commodities that should ideally be produced and sold at a profit. This was a stark contrast to Native people, who had a different concept of ownership: while they did believe that inhabiting land gave people certain rights to it, they generally did not think of land and its products as commodities that could be owned or sold for a profit. Cronon demonstrates how the clash between these two systems of belief was inherently destructive: it meant that when European colonizers imposed their own ideology via

farming and construction, the landscape was changed forever.

One of the most important aspects of the sociopolitical difference between Europeans and indigenous people was the question of property ownership. The right to own property was a key aspect of the European worldview, as Europeans believed that land, plants, and animals could all be possessed as the property of individual humans. Indigenous people had a much different view. It was not that they had no concept of property whatsoever—indeed, this argument was actually used by Europeans for the nefarious purpose of justifying their seizure of Native American land. Rather, their conception of property differed greatly from that of the Europeans: they believed that living on a given area of land gave people certain rights to it, even if they didn't necessarily "own" it in the European sense of the word. As Cronon argues, "Native people generally understood themselves to have rights to the products of the land during different seasons, not that they owned the land itself." Because Native people tended to move around more, the idea that a person (or group of people) could possess an area of land in an absolute, fixed way was less relevant to them. Furthermore, this mobile lifestyle meant that they had few possessions in general: "The need for diversity and mobility led New England Indians to avoid acquiring much surplus property." Ultimately, European colonizers exploited the difference in how Native people conceptualized property in order to unethically seize Native land.

Cronon shows that the desire to gain ownership of the North American landscape and profit from its products was a major motivation for European colonization in the first place. As he argues, "Colonists were moved to transform the soil by a property system that taught them to treat land as capital." Settlers perceived New England to be a land of plenty; however, rather than appreciating this natural abundance in its own right, they saw the land as an untapped source of profit. Due to the clash between their own belief systems and those of Native people, settlers claimed that Native people were foolish or mistaken for only harvesting the exact amount they needed for survival. By imposing their own understandings of property ownership, commodities, and profit onto the landscape, European colonizers did not just change the social world of New England, but the environment itself.

Throughout the book, Cronon repeatedly emphasizes that European settlers saw the land and its products as commodities and thus sources of profit. He even quotes an English explorer named James Rosier describing the plants in Maine as "the profits and fruits which are naturally on these lands." Viewing the landscape as property filled with commodities affected the way colonizers treated it. Cronon points out that "New England lumbering used forests as if they would last forever." Seeing trees as commodities and potential profits, settlers lumbered in a remarkably aggressive manner, neglecting the reality that trees were a finite resource that served an important role within the natural landscape. Ultimately, cutting down trees en masse had a highly destructive impact on the environment. Indeed, Cronon links the colonizers' capitalist views of nature as a commodity to their lack of understanding of nature as an interdependent ecosystem. He claims, "Seeing landscapes in terms of commodities meant something else as well: it treated members of an ecosystem as isolated and extractable units." The result of this attitude meant that colonizers failed to appreciate the way in which every part of the landscape was part of a delicate, balanced system. Aggressively lumbering trees, for instance, had a kind of domino effect on the environment as whole (such as the extinction of animals who used the forest as their habitat and long-term climate change) because trees were an integral part of a fragile, delicately balanced ecosystem. Overall, Cronon shows that European ideas about property ownership, commodities, and profit destructively changed the New England environment because these views were less aligned with nature than the socioeconomic belief systems of Native people were.

COLONIZATION AND THE LIMITS OF UNDERSTANDING

One of the main arguments Cronon makes in the book regards European colonizers' lack of understanding of the New England landscape, the way Native people had been inhabiting it, and the highly destructive nature of their own engagement with it. This lack of understanding had two related sources: ignorance and arrogance. On one hand, it was perfectly understandable that European settlers had limited understanding of the North American landscape because it was generally very different to that of Europe. This led some colonizers to have basic misperceptions about how the environment worked—for example, by initially assuming that "strawberry time" lasted all year long. At the same time, their ignorance meant that they often failed to take the opportunity to learn from Native people about how this new environment worked—they even went so far as to claim that Native people themselves were foolish, naïve, and childlike and that they didn't understand how to properly inhabit their own land. Overall, Cronon shows that the ignorance and arrogance of European colonizers stimulated the destructive changes made to the New England landscape during this period.

European settlers had a limited understanding of both how the North American landscape worked and how Native people chose to inhabit it. They observed that Native practices of land cultivation were very different from their own, but due to ideological differences and an attitude of superiority rooted in racism, colonizers generally failed to understand *why* indigenous people lived the way they did. One of the major misperceptions that colonizers held about indigenous ways of life lay in their assertion that Native people did not know how

to properly cultivate their land, which meant that they lived an unnecessarily frugal life in a land of plenty. Cronon observes, "Many European visitors were struck by what seemed to them the poverty of Indians who lived in the midst of a landscape endowed so astonishingly with abundance." They then used this ignorant belief to justify the seizure and aggressive farming of Native lands, which, in turn, had a negative impact on the environment—sometimes to the point of irrevocable destruction.

The truth was that Native people had a profound understanding of how to cultivate and inhabit the land, but Europeans mistakenly saw this way of life as "impoverished" because their ideology was so different from that of Native people. For instance, Native people did not believe in treating the land and its products as commodities, but instead took only what they needed to survive. This was not really poverty, but instead a more sustainable way of life that fit more harmoniously with the natural environment. Moreover, the Native practice of choosing to fast for periods of time actually meant that they were better able to cope with hunger when it did arise, unlike the Europeans who far more frequently died from starvation. However, because colonizers were unable or unwilling to appreciate the legitimacy of the Native belief system or wisdom about land cultivation, they aggressively imposed their own way of working the land which came to have a highly destructive impact. As Cronon argues, "It was common for colonial settlers to argue that the transformation to the land transformed it from a 'barren' landscape to one of fertility and abundance (in reality, the opposite was true; plant and animal life significantly diminished as a result of colonization)."

This is not to say that Europeans never tried to learn from Native people in order to enhance their own understanding of the landscape. However, as Cronon demonstrates, these attempts didn't always work out very well. For example, Europeans attempted to mimic the practice of forest burning, which Native people employed in order to manage the land and ultimately increase its fertility and health. Cronon explains: "The use of fire to aid in clearing land was something English settlers borrowed from their Indian predecessors, but they applied it for different purposes and on a much more extensive scale." Unlike the Native practice of forest burning, the Europeans' enactment of this practice did not promote the health and fertility of the forest in a sustainable way and was not actually even designed for this purpose. As a result, the Europeans' attempt to learn from the Native way of life backfired, because they were only imitating an individual act rather than the ideology and understanding that accompanied it. The result was that when Europeans engaged in forest burning, it resulted in long-term damage and deforestation.

Overall, then, the limits of European understanding had a massive and largely negative impact on the New England landscape. As Cronon shows throughout the book, the colonizers' limited understanding was not only triggered by their actual lack of knowledge about the landscape, but also their ideological views, which differed from Native knowledge systems to an incompatible degree. The fact that Europeans saw colonization as a journey "from savagery to civilization" meant that they failed to see the problems caused by their own limited understanding. Cronon argues that "In [the settlers"] vision, the transformation of wilderness betokened the planting of a garden, not the fall from one; any change in the New England environment was divinely ordained and wholly positive." Ultimately, this meant that European settlers failed (or refused) to see the destructive impact they were having on the land and its indigenous inhabitants.

HUMAN VS. ENVIRONMENTAL HISTORY

Changes in the Land is considered to have helped inaugurate the field of environmental history, which was previously all but nonexistent in Western academia. In the book, Cronon makes the argument that environmental history and human history are inextricably linked, and that vital information about history in general can be found by focusing on the ecological landscape. Cronon shows that as long as humans have existed, human history has informed environmental history and vice versa, such that it is not really possible to understand one without understanding the other. Indeed, Cronon makes a compelling case that human and environmental history are so closely tied that it is impossible to understand human history without looking to the environment. At the same time, they remain different fields, in part because, as Cronon argues, "Environmental history is in some ways harder to access than human history, requires much different methods." Thus, while Cronon highlights the vital importance of environmental history to human history, he also shows how each field provides its own distinct set of information.

In the book, Cronon shows how human and environmental history complement each other, like pieces of the same puzzle. He argues that historians have thoroughly documented the human stories of colonization, and thus his intention is to provide the environmental side of the story. In the book's introduction, Cronon argues, "My thesis is simple: the shift from Indian to European dominance in New England entailed important changes—well known to historians—in the ways these peoples organized their lives, but it also involved fundamental reorganizations—less well known to historians—in the region's plant and animal communities." Crucially, once people understand the ecological changes that occurred during this period, they will in turn better understand human history.

One example of how Cronon's environmental history enhances existing understandings of the human history of colonization is by showing how Native and European people's respective socio-political systems were in large part determined by the

environmental landscape. As he succinctly explains, "In one sense, economy […] becomes a subset of ecology." The environmental landscape in which the Native people of New England determined the social and economic systems they developed. For example, the comparably more intense winters meant that Native people needed thick, warm clothing, and the abundance of **beavers** meant that Native people wore beaver skins. When Europeans arrived and needed warmer clothing than their fabric clothes, they engaged in a fur trade with Native people, which "revolutionized Indian economies" and led to the eventual extinction of the beaver in many parts of North America, which in turn forced the people of New England (both indigenous people and colonizers) to find new forms of warm clothing. Cronon argues that when the beaver and other animals died out as a (direct or indirect) result of colonization, "The real losers were the Indians, whose earlier way of life was encountering increasing ecological constraints." As this example shows, the environment (and changes to it) determines social and economic history.

Another example of how ecological change has a profound impact on human history is through the devastating story of how Native people were affected by European diseases. Disease is both an ecological and human issue—it is caused by natural phenomena (viruses and bacteria) which in turn has a huge impact on human social life. When Europeans arrived in New England, they brought with them diseases to which they had developed immunity, but to which Native people had not—the result was a series of epidemics that killed a huge percentage of many Native communities. Although these deaths had a purportedly "natural" cause, it is impossible to understand how Native people suddenly started dying en masse from disease without also understanding the story of social interactions between indigenous and European people during this period. Furthermore, the ecological issue of disease in turn had a profound impact on Native social life, changing the human history of indigenous people in New England forever.

In *Changes in the Land*, Cronon effectively shows that any human history inevitably contains environmental history within it, and vice versa. As he argues toward the end of the book, "To compare New England ecosystems in 1600 with those in 1800 as if examining two snapshots […] is to imply that the European invasion was the chief agent of environmental change." Here, he makes the point that not only are human and environmental histories linked, but that evidence of one is embedded in the other. Because historians have tended to neglect the ecological dimension of history, Cronon foregrounds this dimension in order to complete the picture of New England history during the American colonial period.

SYMBOLS

Symbols appear in **teal text** throughout the Summary and Analysis sections of this LitChart.

BEAVERS

Beavers represent much of what was destroyed by the changes to the land that colonization caused, as well as the side effects of damaging or destroying any single part of the ecosystem. Prior to colonization, beavers were a highly common animal in New England that served a particularly important role in the ecosystem. However, as beaver skins were used in the fur trade between indigenous people and European colonizers, beavers became a commodity, meaning they were transformed within colonial society from being a wild animal into an object that had a particular economic value. The result of this was that people lost sight of the ecological importance beavers possessed, something that might have not been apparent to colonizers in the first place. Because beavers built dams, they had a key role in preserving bodies of water and regulating the dryness (and thus the fertility) of the soil. As overhunting led to the gradual elimination of the beaver from its once populous numbers, many unwanted ecological consequences ensued. Beavers thus represent how the colonizers' attitude of treating the land and its animals as commodities was destructive, not just in a direct way, but through a complex web of interrelated side effects.

FENCES

Fences represent the way in which European colonizers imposed their political ideology on the North American landscape. Back in Europe, fences were a ubiquitous part of rural existence, and when European colonizers came to America, they brought the practice of erecting fences with them. As a human imposition on the land that reflects early capitalist ideas about private property, fences changed the landscape it in a way that often had negative results. Fences, of course, do not occur in nature, and they can have a harmful impact on the landscape in a way that natural barriers do not. As fences enforced a monocultural approach to agriculture by confining plants and animals to separate areas, they imposed artificial order onto the balanced, complex, delicate ecosystem. Disturbing it by attempting to impose human order on top of it—particularly if that human order is informed by capitalist principles of private property and profit-making through processing and selling natural resources—can cause profound ecological damage. In this way, fences represent the ideological divide between how Europeans and Native people thought of humans' relationship to the land, as well as the wide-ranging environmental effects than came about from the European colonial mindset.

QUOTES

Note: all page numbers for the quotes below refer to the Hill and Wang edition of *Changes in the Land* published in 1983.

Preface Quotes

The great strength of ecological analysis in writing history is its ability to uncover processes and long-term changes which might otherwise remain invisible. It is especially helpful in evaluating, as I do here, historical changes in modes of production: in one sense, economy in such an approach becomes a subset of ecology.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: xv-xvi

Explanation and Analysis

In the opening of the book, Cronon explains that he will focus on the *ecological* history of colonial New England because without studying ecological history, it is impossible to know the full story of human history. In this quotation, he explains how ecological history and human history are deeply intertwined. As he points out, ecological history provides a different sense of scale than the one to which humans are accustomed. Because human lifespans are very short in comparison to the history of our planet, it can be useful to have another framework—such as biological ecosystems—in order to provide a different perspective on history and witness changes that might otherwise be missed.

Cronon also uses this passage to illustrate the connection between ecology and economy. As he indicates here, economy is determined by ecological factors, including which natural resources are available, how easy or difficult it is for humans to survive, and which resources are desirable as a result of environmental need. In order to properly understand an economic system, the ecological system must be taken into account too.

When I describe Indian ways of life, I intend no suggestion that these were somehow "purer" or more "Indian" than the ways of life Indians chose (or were forced into) following their contact with colonists.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: xvi

Explanation and Analysis

Cronon has explained that he intends to describe the enormous ecological change that defined colonial New England, ultimately highlighting how the process of colonization impacted the environment. However, he cautions the reader not to adopt too simplistic an understanding of his argument, particularly one that assumes the colonial economic system itself did not change and develop across this period. In this quotation, he also warns against the false assumption that Native people fell from a kind of pure state and became less themselves as a result of colonization.

This is a subtle distinction. Cronon concedes that much of the preexisting Native way of life was destroyed and made impossible by colonization—there is no denying this grim and brutal reality. At the same time, indigenous people survived and were no less indigenous than their ancestors, even if their ways of life were disrupted. It is important not to suggest that Native people were pure because this is a falsely mythical impression that is often connected to racist framings of Native people as passive, naïve, childlike, or closer to nature than to humanity.

Chapter 1 Quotes

As we shall see, the period of human occupation in postglacial New England has seen environmental changes on an enormous scale, many of them wholly apart from human influence. There has been no timeless wilderness in a state of perfect changelessness, no climax forest in permanent stasis.

But admitting that ecosystems have histories of their own still leaves us with the problem of how to view the people who inhabit them. Are humans inside or outside their systems?

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 11-12

Explanation and Analysis

Cronon has provided a history of the different ideas about ecological systems scholars have preferred over time. In the early days of ecological research, scholars tended to think of ecological systems as giant superorganisms that went

through life cycles but never really changed over time. They characterized humans as being outside of these pure, static systems. However, as the field of ecology evolved, scholars came to realize that not only did ecological systems change (sometimes dramatically) over time, but that this change was often not caused by humans at all. In this quotation, Cronon concludes that it is mistaken to think that any ecological system exists in "a state of perfect changelessness."

Cronon also considers whether humans are "inside or outside" ecological systems. The fact that he phrases this as a question suggests that he does not believe there is a definitive answer. On one hand, humans are very much part of ecological systems—after all, humans are animals who are integrated into their environments in part through drawing on ecological resources for food and shelter. At the same time, as Cronon will show, some human communities are far more harmoniously integrated into their ecological systems than others. Certain human communities, including the European settlers of New England, have a disruptive and destructive impact on the ecological systems around them. In this sense they could be seen to be "outside" their systems, although their destructive impacts could also be seen as evidence of how tightly bound up they are with the environment.

❝ Important as organisms like smallpox, the horse, and the pig were in their direct impact on American ecosystems, their full effect becomes visible only when they are treated as integral elements in a complex system of environmental and cultural relationships. The pig was not merely a pig but a creature bound among other things to the fence, the dandelion, and a very special definition of property. It is these kinds of relationships, the contradictions arising from them, and their changes in time, that will constitute an ecological approach to history.

Related Characters: William Cronon (speaker)

Related Themes:

Related Symbols:

Page Number: 11-12

Explanation and Analysis

Cronon has explained how ecological history involves not just looking at particular facets of the environment, but viewing the landscape as an entire *ecosystem* and thus viewing individual facets in the context of the web of ecological relations in which they are placed. Indeed, it is actually impossible to understand any single piece of history without paying attention to this web of relations. In this quotation, Cronon gives an example of how an entity like pigs can only fully be understood by thinking about their place in the ecosystem.

Crucially, pigs have relationships not only to other features of the natural landscape (the dandelions they eat) but also to human structures (the fences that enclose them) and even abstract concepts. Indeed, as Cronon shows throughout the book, the way in which people conceptualized the environment completely shaped the way they interacted with it. Believing the pig to be "property" rather than an autonomous living being or a key part of an ecosystem affected the way that colonizers treated pigs. Viewing pigs in this way encouraged people to assert control over them (such as by placing them in smaller enclosures) and maximize the profit they could make on them (such as by owning many pigs at once).

Chapter 2 Quotes

❝ Visitors inevitably observed and recorded greater numbers of "commodities" than other things which had not been labeled in this way. It was no accident that James Rosier referred to the coastal vegetation of Maine as "the profits and fruits which are naturally on these Ilands."

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 20

Explanation and Analysis

Cronon has explained how ecological factors informed human history, noting that the natural environment plays a significant role in shaping social life, politics, and the economy. In the beginning of Chapter 2, he explains that Europeans traveling to the "New World" were astonished by the abundance they found there, and this astonishment was partly influenced by their political ideology. Cronon uses the quote featured here by the English explorer James Rosier to illustrate his idea that capitalism actually affected what European colonizers saw when they looked at the American landscape. Rather than seeing an impressively rich and harmonious ecosystem and appreciating this biodiversity, Europeans were dazzled by the potential "profits" to be made by selling the land's "commodities."

Cronon is making a subtle but powerful point here: if European colonizers were not only motivated by profit but actually *saw* profit all around them, their understanding of the natural world was already warped. Obvious facts—such as the reality that the forest was not an infinite resource or that indigenous people's farming techniques had promoted fertility for thousands of years—became obscured by the motive for profit. In this way, even the gaze that the colonizers cast over the landscape had a destructive bent to it.

❝ When human beings, Indian or European, inhabited and altered New England environments, they were a part of that linear history. Their activities often mimicked certain ecological processes that occurred in nature, but with a crucial difference. Whereas the natural landscape tended toward a patchwork of diverse communities arranged almost randomly on the landscape—its very continuity depended on that disorder—the human tendency was to systematize that patchwork and impose a more regular pattern on it.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 33

Explanation and Analysis

Cronon has noted that the region currently known as New England underwent extraordinary change prior to the arrival of European colonizers. 12,500 years ago, the area was a "glacial tundra"—but over time, it transformed into the fertile, forested landscape that existed when Europeans arrived. During this time, the landscape was affected by the intervention of the indigenous communities who inhabited it. In this passage, Cronon compares environments unaltered by humans to "patchwork[s] of diverse communities." He notes that both indigenous and European inhabitants of the land endeavored to impose order on it. This is a significant (and somewhat rare) moment in which Cronon identifies similarities in the ways that Native and European people altered the land.

While Cronon will later go on to examine the stark differences between indigenous and European peoples' relationship to the natural landscape, here he emphasizes that the two groups had similar motivations for altering the land—even if this led to very different results. Cronon's contrast between "order" and "disorder" highlights a human-centric way of thinking. The "disorder" of the natural landscape may seem chaotic and unmanageable from a human perspective, but that doesn't mean it doesn't have its own internal logic and functionality. Yet in order for humans to use the landscape and its resources effectively, they need to impose a degree of human "order" upon it.

Chapter 3 Quotes

❝ New England's seasonal cycles were little different from those of Europe. If anything, its summers were hotter and its winters colder. Colonists were prevented from realizing this only by their own high expectations of laborless wealth: many initially seemed to believe that strawberry time would last all year.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 35

Explanation and Analysis

Cronon has discussed how some European colonizers were prone to exaggerating the abundance of the New England landscape, falsely implying that living there meant being able to achieve enormous wealth and sustenance with very little work. Naturally, this led to some confusion and disappointment among those who travelled to New England from Europe after having read these reports. In this passage, Cronon discusses one reason behind the exaggeration and misunderstanding that occurred among the colonizers, and how this was related to their ideology. In general, Europeans desired "laborless wealth"—they wanted abundance without effort and saw America's natural resources as a route to achieve this. Of course, the reality is that there is no such thing as laborless wealth—wealth is always created by labor.

Yet more important than the fact of the colonizers' unrealistic expectations was the way in which these expectations affected their perception of the landscape. As Cronon explains, settlers' early capitalist ideology and desire for "perpetual abundance" meant that they failed to see the ways in which New England was actually similar to the home they'd left behind on the other side of the Atlantic. Just as in Europe, the harvest in America did not last year-round, and seasonal changes were actually more extreme in the New World than back home. Yet colonizers were so dazzled by the possibility of endless "strawberry time" that they failed to understand this basic reality.

Here again was the paradox of want in a land of plenty. To a European sensibility, it made no sense to go hungry if one knew in advance there would be little food in winter. Colonists who starved did so because they learned too late how ill informed they had been about the New World's perpetual abundance [...] Indians died from starvation much less frequently than did early colonists, so there was a certain irony in European criticisms of Indians on this core. Whatever the contradictions of their own position, however, the colonists could not understand Indian attitudes toward winter food shortages. Consciously choosing hunger, rather than working harder in the leisurely time of summer, seemed a fool's decision.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 41

Explanation and Analysis

Cronon has explained how indigenous communities in New England adjusted their lifestyles according to the cycle of the seasons. This meant that while food and other resources were abundant in summer, in winter months communities tended to subsist on much less. In this quotation, he notes that Europeans were baffled by this practice, considering how much food was available earlier in the year. Colonizers could not understand why Native people let themselves go hungry when the natural landscape was fertile and overflowing with resources through much of the year.

However, as Cronon points out, the colonizers' confusion was a sign of their own ignorance and incompetence—not that of indigenous people. Choosing to go hungry during the winter months may not have sounded appealing, but it helped Native people stay healthy and survive, rather than dying of starvation like the colonizers did. The contrast between these two approaches to hunger is indicative of the two groups' contrasting ideological belief systems. Colonizers were fixated on the idea of unlimited wealth, growth, and abundance, whereas Native people did not believe in taking more from the natural world than what they needed. This meant that Native people were more harmoniously in sync with the natural world than colonizers, whose clashes with natural cycles damaged both themselves and the environment.

Chapter 4 Quotes

The need for diversity and mobility led New England Indians to avoid acquiring much surplus property, confident as they were that their mobility and skill would supply any need that arose.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 54

Explanation and Analysis

At the end of Chapter 3, Cronon notes that clashes over having a static versus mobile lifestyle was one of the main sources of conflict between European and indigenous people during the colonial period. In the beginning of Chapter 4, he explains that it was easily for indigenous people to maintain a mobile lifestyle because they owned relatively few possessions, and they could easily transport what they did have with them. In this quotation, he notes that it was the desire and need for mobility that inspired Native people to avoid accumulating much property. As becomes clear in other parts of the book, this lack of possessions actually affected how Native people *conceptualized* property.

This provides a useful example of the way in which environmental factors influenced social norms and political ideology. Native people did not value accumulating property because doing so would be a burden to them. In this sense, their relationship to the environment helped shape their ideology. On the other hand, their ideology affected how they related to the land in turn. Rather than abandoning a mobile lifestyle in favor of staying put (and thereby having a more destructive impact on the land, as the Europeans would), they continued to roam around, as they believed they should be harmoniously in sync with the natural world.

Here we must be careful about what we mean by "property," lest we fall into the traps English colonists have set for us. Although ordinary language seems to suggests that property is generally a simple relationship between an individual person and a thing, it is actually a far more complicated social institution which varies widely between cultures. Saying that A owns B is in fact meaningless until the society in which A lives agrees to allow A a certain bundle of rights over B and to impose sanctions against the violations of those rights by anyone else.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 58

Explanation and Analysis

Cronon has noted that European colonizers used their own ideological claims about property ownership in order to suggest that Native people did not really "own" the land they inhabited. With this mindset, Europeans claimed that they had the right to seize the land because Native people were supposedly not cultivating it properly. He explains that Europeans made different kinds of claims about property ownership in order to justify their own theft of Native lands. In this passage, Cronon explains that even the way that colonizers used the word "property" may have seemed neutral, but in fact could convey hidden biases.

Colonizers may have treated "property" as a self-evident concept, but in reality, the idea only has meaning according to certain cultural contexts and laws. As Cronon explains, the idea of something (B) being the property of someone (A) depends on there being a society that will uphold "a certain bundle of rights" that A has over B. Back in Europe, there was an established set of laws and customs that made it meaningful for a person to own objects, land, and animals. This was different from—and clashed with—how indigenous people thought about property. Furthermore, because Europeans were establishing a new society in America, there was a clash between their definition of property and that of Native people, which led to conflict and unjust seizure of natural resources.

> What the Indians owned—or, more precisely, what their villages gave them claim to—was not the land but the thing that were on the land during the various seasons of the year. It was a conception of property shared by many of the hunter-gatherer and agricultural peoples of the world, but radically different from that of the invading Europeans.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 65

Explanation and Analysis

Cronon has been explaining the clash between indigenous and European understandings of property, which the Europeans exploited as justification for unjustly taking Native land. He has explained how (contrary to what is sometimes claimed) Native people *did* have a system of property rights, but that this system was very different from that of the Europeans, who chose not to treat it as valid. Native people's property rights tended to be more flexible, temporary, and conditional than those of Europeans. They were largely uninterested in exclusive use and rarely treated property rights as permanent. The result was that when Native people owned land, it meant that their rights to use the land (under certain conditions) were respected by others.

As Cronon points out, this understanding of property was hardly unique to Native Americans but instead common to many different cultures across the world. Although he doesn't say so outright, this suggests that it is actually the Europeans' belief in permanently and exclusively "owning" land that is the historical anomaly—albeit one that subsequently became the norm across the world.

> Land was allocated to inhabitants using the same biblical philosophy that had justified taking it from Indians in the first place: individuals should only possess as much land as they were able to subdue and make productive [...] A person with many servants and cattle could "improve" more land than one who had few, and so was granted more land, although the quantities varied from town to town. In this way, the social hierarchy of the English class system was reproduced, albeit in modified form, in the New World.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 73

Explanation and Analysis

Cronon has given an account of the way in which European colonizers "acquired" land, a process over which the English monarchy was granted more and more authority as time went on. By a certain point, colonizers stopped considering Native people as having a right to a particular area of land unless this had been granted by the monarch. Within colonial towns themselves, some land was held in common, but overall the emphasis was on private ownership. In this passage, Cronon explains that the way land was granted was based on the idea that the person who could best "cultivate" it deserved to have it.

There are a few important things to note about this

quotation. First of all, the idea that land needed to be cultivated in a particular way reflected a capitalist interest in not only benefiting from the resources of the land, but maximizing the profit it was possible to make. As Cronon argues, that meant that people who were already wealthy were allocated more land. This highlights a key flaw in colonial society. While many settlers traveled from Europe in hope of distancing themselves from the rigidity of European class hierarchies and gaining greater wealth and status, in reality, colonial America ended up reproducing the social systems that existed back home due to its capitalist foundation.

Chapter 5 Quotes

❝ Such animals had fallen victim especially to the new Indian dependence on a market in prestige goods. The Indians, not realizing the full ramifications of what that market meant, and finally having little choice but to participate in it, fell victim too: to disease, demographic collapse, economic dependency, and the loss of a world of ecological relationships they could never find again.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 107

Explanation and Analysis

Cronon has explained how Native people took part in the fur trade with colonizers, during which they were exposed to microorganisms carried by the Europeans that caused diseases against which the Native people had no immunity. The combination of overhunting and disease left Native people increasingly dependent on the colonial market economy. In this quotation, Cronon compares the way in which animals were overhunted into extinction by the colonizers to the fate of Native people who were essentially forced to become dependent upon the colonial market.

As Cronon has indicated, Native people sometimes chose to participate in this market and sometimes didn't. Ultimately, however, their ability to choose was severely restricted by all the ways in which Europeans had encroached on indigenous communities and their land. The more dependent upon the colonial economy Native people became, the more vulnerable they became, which in turn made them more dependent. The result was an escalating cycle in which Native people were systematically robbed, killed, and deprived of their rights.

Chapter 6 Quotes

❝ New England lumbering used forests as if they would last forever. Because prime mast trees were usually scattered among those of lesser value, many less-than-perfect trees were simply destroyed when larger ones were felled. Colonists were usually far more interested in conserving their own labor than in using available timber resources to the full.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 111

Explanation and Analysis

Cronon has introduced the fact that widespread deforestation took place during the colonial period, in part due to an escalation in commercial lumbering. There was much valuable wood to be found in New England forests, which could be used for constructing houses and ships as well as burning fuel. In this passage, Cronon puts the colonizers' approach to the forest in rather stark terms when he says, "New England lumbering used forests as if they would last forever." What this means is not only that the colonizers eagerly cut down as many trees as possible in order to maximize profit, but also that they approached lumbering in a wasteful manner.

Cronon illuminates this wastefulness by explaining how lumberers would destroy and discard "less-than-perfect trees" in their rush to access those of highest value. This example demonstrates how capitalism encourages a wasteful (and indeed inefficient) approach to resource extraction. European colonizers would have used the land more efficiently—and the process would ultimately have been more profitable—if lumberers had taken more time to properly cut down the "less-than-perfect trees" and sell them as well. However, the lumberers were only focused on making an immediate profit and had no interest in the long-term fertility of the forest, leading to destructive behavior.

❝ The use of fire to aid in clearing land was something English settlers borrowed from their Indian predecessors, but they applied it for different purposes and on a much more extensive scale. Instead of burning the forest to remove undergrowth, they burned it to remove the forest itself. Doing so was not only profligate, consuming huge quantities of increasingly valuable timber, but dangerous as well.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 118

Explanation and Analysis

Cronon has explained that while lumbering had a highly destructive impact on the New England forests, this impact was actually dwarfed by that of farming. Colonizers were keen to expand farming as much as possible and eager to own large areas of land in order to maximize profits. This meant that—particularly as the colonial population expanded—more and more forest needed to be cleared for farming purposes. Colonizers used fire to do so in a kind of destructive distortion of the practices of Native people. Indeed, this comparison between Native and European practices of forest burning provides a vital example of the drastic difference between how the two groups treated the land—even in cases of surface similarity.

As Cronon has explained earlier, burning the forest in a controlled manner was a crucial way for Native people to get rid of unnecessary undergrowth while promoting the health of the forest as a whole. The colonizers' deployment of burning, however, worked according to an entirely oppositional logic. Colonizers sought to burn the forest entirely, a process that not only destroyed thriving, diverse ecosystems but also didn't even allow the colonizers to profit from selling the wood.

❝ The colonists themselves understood what they were doing almost wholly in positive terms, not as "deforestation," but as "the progress of cultivation" [...] Reducing the forest was an essential first step toward reproducing the Old World mosaic in an American environment. For the New England landscape, and for the Indians, what followed was undoubtedly a new ecological order; for the colonists, on the other hand, it was an old and familiar way of life.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 126

Explanation and Analysis

Cronon has described how lumbering and clearing the land for farming combined to produce mass deforestation. This deforestation in turn had a series of extremely harmful side effects, ultimately leading to soil exhaustion, the disappearance of plant and animal species, and other forms of disturbance to the overall ecosystem. Remarkably, however, the colonizers did not perceive these effects as negative. As Cronon explains here, their ideological outlook was so powerful that it colored how they perceived the environment and the changes occurring within it. Instead of seeing damage and depletion, they saw "cultivation." Moreover, they saw a landscape that was more similar to the familiar one back home, which reassured them they were doing the right thing.

Of course, as Cronon has shown elsewhere, this is something of a simplification of the colonizers' attitude. In reality, some were troubled by shortages of previously abundant natural resources and likely sensed that they had done some damage to the environment. However, as this quotation reminds the reader, the familiarity of the landscape the colonizers were recreating in the New World was powerful enough to convince people that ultimately everything was as it should be. This comforting image of familiarity distracted from the sheer amount of damage and destruction that colonization involved.

Chapter 8 Quotes

❝ The dynamics which led colonists to accumulate wealth and capital were the most dramatic point of contrast between the New England economy of 1600 and that of 1800. The economic transformation paralleled the ecological one, and so it is easy to assert that the one caused the other: New England ecology was transformed as the region became integrated into the emerging capitalist economy of the North Atlantic. Capitalism and environmental degradation went hand in hand.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 161

Explanation and Analysis

In the book's concluding chapter, Cronon has summarized the sweeping changes that took place to the New England landscape during the colonial period. He illustrates how both the land and its inhabitants were dramatically impacted by the arrival of the Europeans, often in ways that were highly damaging and destructive. Here, Cronon presents one interpretation of this historical reality—an argument about how the capitalist political project brought to New England by the Europeans *caused* the environmental change he has just described.

This is essentially the argument that Cronon makes in the book, but ever the careful historian, he will challenge and complicate it later in the chapter. Indeed, in this quotation, Cronon subtly critiques the idea of maintaining such a simplified explanation of what happened. Just because "the economic transformation paralleled the ecological one" doesn't necessarily mean that one caused the other or that all the ecological change that occurred during the colonial period was caused by economics. Nonetheless—as Cronon will ultimately conclude—most of it *was* motivated by economic gain.

> Economic and ecological imperialisms reinforced each other.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 162

Explanation and Analysis

Cronon has meditated on the extent to which the rise of capitalism that occurred as part of European colonialism can be blamed for all the changes to the American landscape that occurred during the colonial period. He has noted that there is much about capitalist systems of ownership and production that indeed caused massive changes to the environment—changes that then caused further change due to the complex interrelation of different parts of the ecosystem. Indeed, this short quotation conveys a kind of domino effect. Even if the reader doesn't interpret every ecological change as having a direct economic incentive, it is also true that "ecological imperialisms" were an issue in their own right.

Indeed, these ecological imperialisms—such as the introduction of European diseases into the Native population or the shift to keeping domesticated livestock—did not have to have a direct connection to capitalism in order to echo the destructive impact of capitalist production. As Cronon emphasizes, the two "reinforced each other" and thus were linked even if they weren't exactly the same thing.

> By making the arrival of the Europeans the center of our analysis, we run the risk of attributing all change to their agency, and none to the Indians. The implication sis not only that the earlier world of the "Indian" New England was somehow static but also that the Indians themselves were as passive and "natural" as the landscape. In fact, the Indians were anything but passive in their response to European encroachments.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 164

Explanation and Analysis

Cronon has concluded that European colonialism—and with it, capitalism—was the most significant factor in the drastic changes to the New England landscape that occurred between 1600–1800. Here, he again chooses to complicate this historical argument by drawing attention to the active role of Native people in this history. Just because Native communities suffered devastating losses and unjust thefts during the colonial period does not mean that they were passive subjects. Similarly, it is important not to conflate Native people with the American natural landscape even while examining the ways in which Native communities pursued ways of life that were largely harmonious with the natural rhythms of the land.

Part of the reason why Cronon is pointing this out here is that these are common misconceptions that proliferate about Native people and give a wrongful impression of the historical reality. Indeed, throughout much of American history, colonizers have expressed racist attitudes toward Native people not necessarily in the form of direct antagonism, but instead by portraying Native people as passive, naïve, childlike, or animalistic. In reality, indigenous people were powerful, resilient, highly skillful, and knowledgeable, and they were active agents of political resistance to colonization.

> Ecology can help us analyze why Indians in 1800 had trouble sustaining themselves on the lands which remained to them, but it cannot explain why they had been compelled to live on those lands in the first place. Only politics can do that.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 165

Explanation and Analysis

Cronon has reminded the reader not to underemphasize the agency of Native people or to imply that they were passive historical subjects who made no significant contributions of their own. At the same time, he acknowledges the awful fact that colonizers unjustly seized the land of Native people, thereby destroying their way of life. Here, he returns to the question of how ecological and human history complicate each other. Without turning to ecology, it can be difficult to prove why the loss (and restriction) of land had such a devastating impact on Native communities. It is only by considering how Native people were part of a highly complex, diverse, and delicate ecosystem that it becomes clear that their very survival was thwarted by colonization.

At the same time, there would never be purely ecological evidence that explains why Europeans wanted to seize Native land or how they did it—only social, cultural, political, and economic factors explain this. By combining these two sides of history, it is easier to acquire a full perspective on how colonization took place and transformed the New England landscape.

> Colonial economies underwent nearly as profound an evolution in New England as those of the Indians.

Related Characters: William Cronon (speaker)

Related Themes:

Page Number: 167

Explanation and Analysis

Cronon concludes the book by summarizing the ways in which European colonization and capitalist ideology radically transformed the New England environment during the colonial period. He has included several caveats and counterexamples to this argument, thereby making it more nuanced and historically accurate. Toward the end of the book's final chapter, he provides another caveat: to argue that the colonial economy transformed the New England landscape might lead readers to assume that the "colonial economy" was a fixed entity during the period of 1600–1800.

The reality could not be further from the truth, as the colonial economy actually underwent enormous transformations during this time. Reasons for this included the booming of the settler population, the escalation of the Atlantic slave trade, the contribution of the slavery economy to American wealth, changes in agricultural styles, the diminishment of natural resources, increasing urbanization, and many other factors. While these are in some ways beyond the scope of the book, it is important to remember that the pressures being exerted on the landscape as a result of economic factors were not the same throughout the colonial period but changed as the economy itself changed.

SUMMARY AND ANALYSIS

The color-coded icons under each analysis entry make it easy to track where the themes occur most prominently throughout the work. Each icon corresponds to one of the themes explained in the Themes section of this LitChart.

PREFACE

Changes in the Land is "an ecological history of colonial New England." In addition to considering the history of human society, the book's author William Cronon focuses on the natural landscape and nonhuman inhabitants of New England during this time period. His main argument is that the colonization of the New England area significantly changed the natural landscape, an issue that is rarely discussed in historical accounts. Focusing on natural history in this manner in turn illuminates much about human history. The book examines how the ecosystems of precolonial New England differed from those of the European colonizers. It also contrasts the very different beliefs about property ownership held by the respective groups.

This introductory passage lays out the book's purpose: to illustrate the ecological history that often gets left out of narratives of colonial America. Note that prior to the publication of Changes in the Land, *environmental history was uncommon in academia. Shifting history's focus to include the natural world in this way thus had a revolutionary impact on the discipline of history.*

Neither the colonizers nor the Native people of New England maintained a fixed, static way of being during the period covered by the book (1620-1800)—significant changes took place within that period, too. *Changes in the Land* is an interdisciplinary project and bringing together several very different disciplines can be a risky endeavor. Cronon thanks the professors who helped him with the project, which began as a seminar paper he wrote during graduate school. He also credits the resources at Yale University, including many different libraries, which he used to conduct his research. He thanks colleagues, friends, and his wife for their support in completing the project.

Changes in the Land *is an extraordinarily influential book and the fact that it began in the humble form of a graduate school seminar paper is striking. The fact that environmental and human history are intimately interconnected might seem obvious, but highlighting this connection in the way Cronon does was actually rare.*

CHAPTER 1: THE VIEW FROM WALDEN

In 1855, Henry David Thoreau recorded the changes to the environment in his home of Concord, Massachusetts, which by that time had already been a European settlement for over 200 years. He compared what he saw around him to the observations made by the English traveler William Wood, who published his observations of southern New England in a 1633 book called *New England's Prospect*. Thoreau noted that the landscape seemed to have changed significantly in this time. There were now fewer wild meadow grasses and fewer gooseberries, raspberries, and currants. The forests were bigger back in 1633, without as much underbrush.

Here Cronon provides an important reminder that noting the changes to the American landscape that occurred during the colonial period is not something only apparent to people living in the present. Indeed, the landscape changed so dramatically during this period that those in the nineteenth century were also aware of what had happened.

While most of the same types of trees existed in 1855 as did in 1633, the same was not true of animal species. By the time Thoreau was writing, bears, moose, deer, porcupines, wolves, and beavers had all disappeared from the local environment, as had many types of fish and birds, including swans. Thoreau lamented these losses, characterizing them as a fall from Eden. He called the landscape he saw "tamed" and "emasculated." His observations demonstrate the impact that European colonizers had on the land. Many settlers who lived before Thoreau's time were aware of these changes too, yet unlike him they tended to celebrate rather than lament them.

Although Cronon only hints at it here, Thoreau was part of a generation of Americans whose attitude toward the land (and its original inhabitants) shifted from previous eras. In the face of intensifying industrialization, people like Thoreau began to idealize the supposed purity and natural abundance of the precolonial landscape.

For example, in 1654 the historian Edward Johnson argued that the "barren" landscape had been turned into "a second England for fertileness." Settlers like him held that the colonization of New England was "divinely ordained," which meant that all changes to the landscape that resulted must inherently be positive. They argued that the process of colonization was a transformation "from savagery to civilization." During this process, the Native population was killed and displaced by European settlers. Understanding how this happened requires examining the ecological history of the region. Ecological history requires different kinds of evidence to human history.

The book consistently explores the ways in which ideology affects not only how people behave but even how they see the world around them, including the natural world. Some might assume that the environment is a self-evident, objective reality that everyone views the same way, but Cronon shows that this is not the case. The way that people see the world around them is shaped by what they think about it, and this varies greatly between cultures.

One of the most important sources for this book is the accounts of the environment made by European naturalists in the late eighteenth century. At the same time, this evidence is not necessarily reliable, because what naturalists reported seeing was inevitably colored by their beliefs. Moreover, naturalists only ever saw a small part of the country and tended to generalize based on this inherently limited information. Another source of evidence can be found in legal records from colonial towns and courts, such as laws that protected trees in town commons. Yet these also provide limited information, as it can be difficult to know what environmental changes prompted these laws (or what environmental changes the laws prompted themselves).

Historical evidence is always imperfect in some way; it never supplies a detailed and exhaustive picture of the past. This passage examines how ecological history relies on both highly-subjective evidence (the testimony of naturalists) and data that is supposedly more objective (colonial laws and records), but it shows that neither give a complete or fully accurate depiction of the past.

There are also forms of evidence that are very different from what historians ordinarily use, such as tree rings, charcoal deposits, and fossil pollen found in bog sediments. At the same time, some of the environmental changes that occurred during the colonial period have simply left no traceable record. As a result, claims about them must inherently remain speculative. The accounts made by naturalists often used imprecise language, making it difficult to definitively know what was being described. A type of plant might not be mentioned by its proper name in accounts made by naturalists, but that doesn't mean it wasn't there.

The idea of using environmental features as "evidence" was a contribution made by ecological history that had a transformative impact on the discipline of history as a whole. At the same time, like the other forms of evidence mentioned above, ecological evidence could not provide full (or fully accurate) information and is thus also usefully combined with other forms of proof to try to reconstruct the natural world of generations past.

It can be tempting to attribute *all* ecological change that occurred during the colonial period to the impact of colonization, but in reality some of these changes were part of preexisting patterns, whereas others were "random." Asking how much the environment changed as the result of human activity is always a relative question, as environments are always changing even without human intervention. When the field of ecology was first developed, it was common to characterize environments as "superorganisms" that went through their own life cycles as a unit. Humans were considered to be separate from ecological systems, having a "corrupting" influence on their natural cycles.

Here Cronon shows how there is no single way to think about entities like the environment, its history, and its relationship to humans. Indeed, scholars have had very different approaches to understanding these entities at different times. Part of the practice of ecology is figuring out the best ways to characterize and depict the environment using human language and concepts.

Over time, scholars realized that the superorganism metaphor did not accurately describe ecological systems and how they changed, so by the middle of the twentieth century it fell out of use. As scholars began to see change as an inevitable part of ecological systems, they sought to understand the impact of humans on this process of change. It is wrong to think of any environment as existing in a state of static "changelessness." Yet the question of whether humans are "inside or outside their systems" remains. Thoreau portrayed precolonial New England as a pure, untainted wilderness that was "maimed" by the arrival of colonizers.

Here Cronon emphasizes that measuring human impact on the environment requires an awareness that environments inevitably change even without human input. This is not to understate the enormous (and enormously destructive) impact that humans have often had on the environment, but rather to contextualize this impact in a more accurate way.

However, this is wrong. Native people had been living on the land for thousands of years before the arrival of Europeans and had changed it for their purposes. Human impact on the land did not begin with European settlers; however, they did have a significantly different way of "belonging" to the environment than indigenous communities. *Changes in the Land* examines how these different modes of belonging impacted the environment in distinct ways. Before the arrival of Europeans, Native people cultivated the landscape in a kind of "equilibrium" that was disrupted by the process of colonization.

This passage makes an important clarification that it was not human impact in general, but rather the specific impact of European colonizers, that had such a dramatic impact on the New England landscape.

Yet it is also important to remember that Native people did not always treat the land in a way that was sustainable—sometimes they too had a disruptive impact, which harmed both the land and themselves. The fact that humans alter their environments is one of the definitive characteristics of the species. Often, features of the environment itself help determine the way a human community reacts to it. The way that each community alters their environment itself changes over time—in other words, it has a history. Even though ecology has left behind the "superorganism" way of thinking, it is still useful to consider environments as complex, interrelated systems. No one part of a system can be properly understood in isolation.

Like any good historian, Cronon constantly highlights the limits of his own argument. A historical narrative like this one inevitably requires speaking in generalizations; when Cronon discusses the behavior of Europeans or Native people, he is providing a simplified description of what was in reality an extremely diverse and contradictory reality. He reminds the reader of the messy reality lying beneath his descriptions by repeatedly noting the limits of these descriptions.

Examining the different parts of an environmental system in relation to each other is part of what defines the "ecological approach to history." It is best to pursue this kind of research on a specific, local area, although New England—the focus of *Changes in the Land*—is fairly broad. In colonial New England, there was a clash between two groups of people (European and indigenous) who each had very different ways of relating to the landscape. Readers may or may not agree with Thoreau's belief that the changes to the New England landscape that occurred as a result of colonization were a bad thing. Either way, it is true that the only way to truly understand human history is to examine the ways in which humanity is embedded within nature.

As becomes clear in passages like this one, Cronon makes an effort to present an account that is fairly politically neutral. He leaves room for the possibility that readers (like most of the colonizers who populate the book) will think that the changes to the land brought by colonialism were a good thing. However, it is also true that the evidence he describes tends to indicate that overall, colonizers had a disruptive and destructive impact on the landscape.

CHAPTER 2: LANDSCAPE AND PATCHWORK

The landscape that European settlers encountered was different from Europe, but it took a long time for the settlers to properly understand this difference. The first who arrived did not see much of the new land, as they did not travel inland from the coast. As time went on, settlers tended to focus on aspects of the landscape that could be sent back to Europe and sold for money, such fur and timber. Many of those who travelled to the area described features of the natural world using the terms "profits" and "commodities." "Profits" were abundant, as there were many natural resources in America that were limited or unavailable back in Europe.

This passage provides another important reminder that a person's subjective perspective and political ideology affect not only how they behave, but even what they see. Europeans were familiar with the European landscape and thus inevitably saw this familiar environment in the land of the New World. Furthermore, their political inclination to focus on commodities and profits also shaped how they perceived the land in front of them.

During the early period of colonization, it was not yet technologically possible to transport certain goods, such as firewood, back to Europe. Nonetheless, the "scarcity value" of goods like firewood encouraged settlers to view them as objects of potential profit anyway. In this sense, the way that settlers viewed the American landscape was inescapably shaped by their memories of Europe. Understanding the natural landscape as a set of "commodities" also meant that settlers viewed facets of this landscape as "isolated and extractable units," rather than parts of an interdependent system. As such, Europeans had a poor understanding of "ecological relationships."

As Cronon shows here, it was not so much the case that Europeans didn't properly understand the natural world (although, as he shows throughout the book, their understanding tended to be inferior to that of Native people). Rather, their political ideology *encouraged them to view the landscape in a distorted manner.*

At the same time, there were differences in how settlers perceived New England's natural resources and how European visitors did. Those who were building a new life for themselves in America were more invested in altering the landscape to suit their lifestyle. Overall, Europeans' view of the American landscape was significantly distorted by their particular assumptions and desires. Yet their perception that New England was filled with an abundance of natural resources was correct. They left breathless descriptions of the number and variety of fish in New England's coastal waters. They were also astonished by the abundance of birds such as geese, ducks, and wild turkeys. The most common bird by far was the passenger pigeon.

This passage indicates that the European perspective was not just influenced by their memories of the landscape at home, but also their shock at how different the New World was. In particular, Europeans were astonished by the abundance of natural resources in America. This led to the mythologization of America as a land of plenty (and plenty of potential profit).

Colonizers were also impressed by the animals in New England. These included bears, deer, wolves, foxes, beavers, otters, martens, wildcats, and moose. They were also surprised by the lack of certain species that were common in Europe, as well as an absence of domesticated animals such as horses, sheep, goats, pigs, cats, cattle, dogs, and rats. Many of the microorganisms that caused disease in Europe were also absent and colonizers remarked on the relative lack of death from disease among their communities compared to those back home in Europe.

This passage highlights that while some of the differences between the European and American environments were obvious to colonizers, others were concealed or less easy to understand. For example, while remarking on the notable health of the Native population, colonizers likely did not realize that they were bringing new diseases from Europe that would ravage this previously healthy people.

Settlers also noted the richness of the forests and were delighted by the abundance of timber. However, just because the woods were thick does not mean they were messy and "impenetrable." There were many clearings and some areas, such as what is currently Boston, were "nearly barren." Colonizers soon noticed that northern New England had thicker forests and colder weather than the southern part of the region; they did not think of the area as a monolith. Ecologists used to call the southern area, which includes Connecticut, Rhode Island, and parts of Massachusetts, the "oak-chestnut region" after the trees that grew there. The northern part, which includes most of Vermont, New Hampshire, and Maine, was defined by its "northern hardwoods." The central section contained a mix of these two types of trees.

One of the features of the precolonial New England environment that Cronon especially highlights is its internal diversity. Rather than seeing New England as an ecological monolith, settlers divided the region by the types of trees primarily found there, showing that the environment was central to their understanding of geography.

However, this kind of classification is not necessarily that useful, as in reality the precolonial forests of New England contained a "mosaic" of different kinds of trees. In a given region there might be clusters of different forests sitting next to each other in a "complex patchwork." There was also a diversity of soil in the region; this variation, as well as the soil's fertility, played an important role in determining the hospitability of an area for settlement. The region also contained streams, swamps, and what the colonizers called "quaking bogs," where the wet ground shook underneath a person's feet.

The "mosaic" is an important metaphor Cronon uses throughout the book to describe the beautiful natural diversity of the precolonial New England landscape. Although the land could seem messily and chaotically organized to the colonizers, in reality it followed a complex, harmonious organic logic.

In contrast, other areas had dry soil, such as much of Cape Cod, which has a milder and drier climate than anywhere else in New England. However, the region was not seen as a desirable location for settlement, and those who did eventually choose to live there faced "special problems." Across New England, forest fires were very common—both those started by humans and those that occurred naturally. Europeans were especially astonished by the tall forests of white pine, which was perfect for making ships. However, in their excitement the colonizers mistakenly assumed that there was an "infinite store" of these trees when in fact their number was rather limited.

One of the motifs that Cronon returns to throughout the novel is the ignorance caused by the colonizers' desire to profit and produce goods. Indeed, within an early capitalist political ideology, need, desire, and greed could easily blur into each other. What began as a genuine need (timber for ships) could escalate in a destructive manner, thanks to the way in which capitalist ideology treated natural resources as infinite commodities.

Other parts of the New England landscape contained abundant resources, including the oyster banks of Massachusetts Bay and the waterfowl that gathered in the salt marshes of the same area. Cronon reemphasizes that precolonial New England was a diverse "patchwork" that had been shaped by complex historical processes. Around 12,500 years ago, New England was a "glacial tundra," but over the time the landscape dramatically transformed into the forested area that exists today. During this period, the landscape was constantly shifting, and not merely in a "cyclical" way.

The fact that the landscape changed so much as a result of entirely nonhuman processes is an important reminder that humans are not the only agents of ecological change. Ecological change is normal and natural, whereas change caused by humans can both accentuate and go against natural rhythms.

Both indigenous and European inhabitants of the landscape contributed to this history of change, imposing order on the natural world. By the time European colonizers arrived, Native people had already been living in New England for 10,000 years. The Europeans were baffled by the Native peoples' way of life, which they saw as pointlessly impoverished in a land defined by abundant resources.

It is important not to characterize the precolonial landscape as pure and untouched, because the reality was that it had been inhabited by a human population for 10,000 years. The landscape that European colonizers encountered had already been changed by other people.

CHAPTER 3: SEASONS OF WANT AND PLENTY

Some Europeans were wary of describing the abundance of New England's resources in exaggerated terms or suggesting that the area was a paradise wherein much "wealth and sustenance" could be gained with little effort. Some Europeans arrived in New England expecting a mythical "land of plenty" and were disappointed by what they found. Part of the reason for the problem of misinformation was that many of the first accounts of the landscape were written by those who arrived in spring and summer, and this created the false impression of "perpetual abundance." The contrast between summer and winter was generally more extreme in New England than in Europe, but the overall cycle of seasons was essentially the same. However, colonizers were so excited by the idea of "laborless wealth" that they failed to see this.

From today's perspective it may seem extraordinary that European arrivals in America could misunderstand something as obvious as the seasons. Yet at the same time, it is important to remember just how different the American landscape was from Europe and how little information European travelers had about it. They could not assume that this new environment bore a resemblance to Europe, because in many ways it didn't.

This misunderstanding of the seasons had dangerous consequences; unaware that the summer abundance did not last year-round, some settlers did not store away food for winter and ended up dying of starvation. Many colonizers arrived in New England expecting to be able to recreate the lives they had left behind, with the same kind of agriculture, patterns of labor, and social structure of society (although they also hoped they would personally have elevated status in their new home). However, establishing an society in which all this would be possible proved to be an enormous and difficult undertaking.

This passage shows how the hopes and desires colonizers had for their life in the New World often clashed with a very different reality. Indeed, the expectation of a life of abundance could be dangerous in many ways, not least because of how that expectation underprepared people to deal with the reality of trying to survive in an entirely new environment.

New arrivals found themselves highly dependent on the support of others, whether European or Native. Some participated in trade with indigenous people. At times, Europeans characterized indigenous communities as leading the life of effortless wealth they desired; however, this belief highlights the limits of their understanding of both the landscape and the Native people who inhabited it. The ecosystem of New England is defined by cycles of light and dark, hot and cold, and high and low tides. Every part of the ecosystem is in sync with these cycles, adjusting its behavior accordingly. Native people similarly harvested food according to seasonal cycles, a practice that "required an intimate understanding of the habits and ecology of other species." Colonizers, on the other hand, did not have such knowledge.

For obvious reasons, European arrivals in America had much to learn from indigenous people, who had acquired thousands of years' worth of knowledge about the landscape and how to flourish with it. However, due to ideological differences as well as the false sense of superiority created by racism, not all colonizers were open to realizing (or admitting) how much information they actually needed from Native people.

One of the ways in which indigenous communities adapted to seasonal cycles was by being mobile. Most precolonial indigenous people lived in villages, small settlements that moved from place to place depending on where resources were available. Everything about indigenous communities' way of life reflected the need to be mobile. Native people adjusted their living structures depending on where they were located and they avoided having numerous or unwieldy possessions. In general, communities who lived below the Kennebec River grew crops, whereas northern communities did not practice agricultural cultivation due to a less hospitable climate. As a result, northern indigenous people fed themselves purely through hunting and gathering.

This passage provides useful examples of the way in which indigenous people crafted their lifestyles around environmental demands and possibilities. Rather than seeking to impose order or control over an environment in order to live the way they wanted, they developed a lifestyle that was largely in harmony with the natural resources available to them. This was a sustainable arrangement that allowed their communities to flourish.

In northern New England, spring began when the ice began to break up, at which point indigenous communities who had been living inland would return to the coast and start fishing. Until September of every year, there was an abundance of fish. Communities also gathered and ate birds' eggs during the months of April, May, September, and October, based on the migratory patterns of birds. In July and August, they gathered nuts, berries, and wild plants, and hunted birds, whales, porpoises, walruses, and seals. In September, communities moved inland again, and between October and March they would kill and eat beaver, caribou, moose, dear, and bear. Men hunted the animals while women prepared the carcasses to be eaten.

Like Europeans, Native people engaged in different practices according to the shifts of the seasons. This allowed them to take advantage of what the land had to offer at different times while surviving the periods in which there were fewer resources and when harsh conditions (such as cold temperatures) made survival more difficult.

During winter, northern indigenous communities relied on snow to hunt animals via their tracks. It was an accepted fact of life that during February and March there was often little to eat. Colonizers found this difficult to understand and remarked on how strange it was that northern Indians did not store extra food in the fall in order to ensure that they did not go hungry in winter. However, it was colonizers who died of starvation at a much higher rate than Native people. One of the results of indigenous people subsisting on very small amounts of food in winter was that their population remained fairly low.

For much of American history (and still to a significant degree in the present), indigenous science, medicine, and other fields of knowledge have been discredited. Yet the truth is that the information indigenous people had gained about their own bodies and the environment was rich and effective, as demonstrated by this fact about low starvation rates.

Indigenous communities of southern New England also practiced hunting and gathering, but they raised crops at the same time. Growing crops meant having a steadier supply of food during the winter, as grain could be stored during the colder months. This meant starvation was not as much of a concern for southern Native people. For this reason, they were much more populous than those who lived in northern regions. Northern and southern Native people had very different relationships to the seasons, which was reflected in the different terms they used to describe parts of the year. In southern New England, time was divided into months based on the harvest of crops.

The distinctions that Cronon draws between the indigenous people of northern and southern New England throughout this chapter are an important reminder of the internal diversity of the indigenous population. While Native people are sometimes oversimplified as one culture by American settlers, in reality there was an enormous variety of cultures, languages, and ethnicities within the Native population.

The agriculture practiced by southern Native people had a gentle impact on the landscape and generally did not cause soil erosion. They used cornfields to grow not only corn but also kidney beans, squash, pumpkins, and tobacco. Colonizers, who were used to fields being used to grow only one crop, thought that the practice of combining many different ones in a single field was "messy." However, in reality, this was a way of using the land efficiently, as well as creating a balanced, nutritious diet. Women were generally charged with tending to the crops, a task that was "compatible with simultaneous child-care." In the spring, men fished. The idea that Native people used fish as fertilizer is largely a myth and was certainly not widely practiced.

Even though Europeans also practiced farming, the way in which Native people approached this pursuit was very different from their European counterparts. While the two groups shared some common impulses, the overall ideology driving their lives was very different. Importantly, the two systems had massively different impacts on the environment.

In the summer, when crops needed less constant attention, Native people tended to move their encampments around, sometimes in order to avoid conflict or high concentrations of fleas. Men often embarked on multiday hunting or fishing expeditions, travelling in canoes on journeys that could be quite dangerous. In the fall, harvest festivals took place, along with rituals in which wealthy people gave away most of what they owned. After the harvest was over, the winter hunt for animals such as bears and deer began. This endeavor required a great amount of skill and knowledge about animal behavior. During this period, men who were out hunting would often go for several days without food. The animals they caught were used for both food and fur.

While Europeans chose to interpret the lifestyles of Native people as simple and primitive, in reality this was far from the case. Indigenous ways of life were informed by highly complex, specialized knowledge and evolved extraordinary skill. It's noteworthy that indigenous peoples had rituals in which wealthy people gave away their belongings; this is a marked contrast to the capitalist ideology of the settlers who wanted to amass goods and wealth for themselves in New England.

Southern indigenous communities thus had what was in some ways a more "complicated" relationship to the landscape than those in northern regions. By practicing agriculture, those in the south took a more active role in changing the environment to their own purposes. Women would use fire to clear fields before planting corn in them. They would usually use a particular field for around eight to ten years before moving on once the soil lost its fertility. Like Europeans, Native people sometimes faced fuel shortages, and some assumed that this was the explanation for why the colonizers had come to their land in the first place. Native people also used strategic burning of the forest to clear it of unwanted underwood and fallen trees.

Again, this passage shows that it is not as if Native and European lifestyles were so diametrically opposed that no common ground could be found between them. In fact there were similarities both in the kinds of activities they pursued (farming), their attitudes toward the land (wanting to assert order and control), and problems they faced (fuel shortages). Indeed, these similarities arguably make the extent of their differences even more astonishing.

Native people in northern New England did not use this practice of burning, in part because they did not need to alter the landscape in the way that their southern counterparts did. Colonizers failed to properly understand the reasons why Native people practiced forest burning, largely unaware of the complex ecological benefits it engendered. In reality, the practice of forest burning helped stimulate the diverse "mosaic effect" of the natural landscape and also fostered habitats for a huge array of wildlife. Colonizers, who were used to keeping domesticated animals, didn't understand this. They also did not understand the division of labor in indigenous communities, falsely believing that women did all the work. Native people, for their part, often struggled to understand why European women seemed to do nothing.

Some of what the Europeans failed to understand about indigenous approaches to the land had to do with their labor and practices being invisible or highly complex (such as the ecological benefits of controlled forest burning). However, in many cases the colonizers' failure of understanding was due to ideological differences. Colonizers presumed that the gender system that existed in Europe was natural and obvious, when in reality this was far from the case. Indeed, there was no natural or obvious reason why European women refrained from doing the kind of labor Native women did.

This confusion was caused by the fact that Native people could not see why women should not work in the fields, whereas Europeans did not consider the hunting and fishing performed by Native men to be serious labor. Indeed, the Europeans took this idea even further, eventually taking Native people's hunting practice as the basis for their argument that they didn't really own the land they inhabited—and that Europeans could thus take it for themselves. In reality, indigenous communities simply had a sustainable relation to the land which harmoniously fit with the environment's natural cycles. Before long, a clash arose between Native people's mobile lifestyles and the Europeans' desire to build fixed settlements.

It is often difficult to tell whether colonizers really believed something to be true or whether they used it strategically as an excuse to steal indigenous people's land and resources. In most cases, the answer is probably somewhere in between. Colonizers of course encountered issues in understanding a culture very different from their own—yet this ignorance often became convenient when they wished to interpret Native life in ways that suited their agenda.

CHAPTER 4: BOUNDING THE LAND

Maintaining a mobile lifestyle was easy for indigenous communities because all their possessions could be easily transported with them. Europeans who viewed Native people as impoverished were misinterpreting the true situation. Early colonial writing was filled with criticism of the way that Native people lived; writers charged Native people with being lazy, foolish, wasteful of the land, and prone to pointless suffering. Again, English colonizers used Native hunting and gathering as an excuse to steal the land, claiming that indigenous communities "squander[ed] the resources that were available to them."

Here it again becomes clear that Europeans developed ideas and arguments about Native life that served their agenda of stealing resources from—and thus strategically disempowering—Native people. It's also clear how deeply they misunderstood aspects of Native life, seeing their few belongings, for instance, as poverty, rather than as a strategic adaptation for a nomadic life.

The colonizer John Winthrop claimed that there were two modes of land ownership, natural and civil. He held that people acquired natural citizenship by inhabiting and cultivating land. However, this was inferior to civil ownership, which was adjudicated by law. According to this theory, only the cornfields that Native women cultivated "naturally" belonged to them—the whole rest of the country was free for the taking. In reality, of course, this was an excuse that colonizers used to seize land they wanted. They did sometimes acknowledge indigenous ownership of the land, such as when they bought land from indigenous communities. Regardless, it was consistently obvious that the colonizers did not care what Native people themselves thought about land ownership.

As this passage shows, there was a lot of hypocrisy and internal contradiction in the way that colonizers dealt with indigenous land ownership, which further proves that they tended to choose interpretations that suited their goal of taking over the land. If it seems as if sometimes colonizers believed Native people owned their land and sometimes they didn't, this is because they adjusted their "beliefs" in ways that benefitted them.

The consequence of this is that there are few records in the historical archive about Native people's views on land ownership during the colonial period. Even the word "property" is contentious and can be used to uphold a European political perspective. The concept of property only works if the society in which a property relation occurs agrees on its meaning. For indigenous people, two key concepts were at play: ownership and sovereignty. Ownership involved respecting a person's right to property within a given community, whereas sovereignty meant those outside the community—such as other tribes—recognized a set of territorial rights. Europeans struggled to understand these interlinked concepts.

As Cronon reminds the reader here, "property" does not have self-evident meaning. The idea of property is a feature of the human world that only makes sense if a group of people share the same understanding of its meaning and agree to uphold this meaning.

Native villages had to respect one another's right to occupy the land they (temporarily) inhabited. This was often arranged via the village's leader—the sachem—although colonizers tended to overemphasize the sachem's authority, even mischaracterizing indigenous communities as monarchies. The truth is that sachems were not like European kings. Social power within communities was dictated by complex kinship networks that expanded across villages. Overall, there was more "flexibility and movement" than in European political institutions. A village "owned" land in the sense that others respected the sovereignty of their sachem. Borders between settlements were "precise" and colonizers observed that villages sometimes made land deals and transfers with one another.

This passage illustrates how easy it is to transpose one's own cultural framework onto a different one. Seeing that Native villages had leaders (sachems), some colonizers chose to interpret these leaders as equivalent to the European monarchy and aristocracy. However, in reality these roles were incredibly different. Dangerous miscommunication and misunderstanding can result from assuming too much similarity or reading another context through one's own preexisting frameworks.

However, land was not "sold" by sachems, something that confused several colonizers. Transfers of land were "diplomatic" deals, not economic ones. Within a given village, people were considered to own things they had personally made and used. This meant that women owned things like baskets and hoes, whereas mean owned bows, arrows, and canoes. However, there was also "little sense either of accumulation or of exclusive use." Ownership was related to how something was used and colonizers remarked on how "generous" Native people seemed to be with their possessions. Giving away possessions was efficient, helping to establish a norm of "reciprocity."

The difference between owning and exchanging land in the way the Europeans did versus using and exchanging it in the manner of Native people might seem trivial, even semantic. But the differences Cronon outlines here are actually crucial. A "diplomatic" arrangement rather than an economic one bespeaks a higher level of cooperation and also meant that Native people were not incentivized to acquire more land than they needed.

Yet while exchanging possessions was useful, the same was less often true of land. Native communities didn't think of themselves as owning a particular patch of land in a permanent way, as they moved from place to place—"What families possessed in their fields was the *use* of them." They had rights of ownership, but these shifted when the community moved away. Communities did return to certain patches of land, but colonizers chose not to recognize indigenous people's rights to the land because it fell outside of what Europeans defined as ownership, which depended on permanent settling and agricultural cultivation. This was very different from the Native system of property rights, which was flexible and shifted according to "ecological use."

Again, the idea of possession is so deeply ingrained into Western culture that it might seem natural to many readers in the present. However, this is actually far from the case. While no human is entirely free from possessions (in the sense of objects they keep around and use), how possessions are defined—what it actually means to own or use something—has always fluctuated across different historical and geographic contexts.

Native people's understanding of their rights to animals was similarly flexible and complex. Animals that were abundant and easy to catch were owned by whoever killed them, but those that were rarer or needed to be caught using traps belonged to the person whose trap they were caught in. Overall, Native people believed that they had property rights to the products of the land, which meant that these rights shifted with the seasons. This conception of property ownership was actually common among both hunter-gatherer and agricultural communities all over the world, but it was very different from what the Europeans believed.

Again, the idea of owning animals is very normal in Western society, such that many readers would not question the idea that a person could own cows in a dairy farm or a pet cat. Yet for Native people, this was not an obvious fact at all. While Native people did kill animals for food, clothing, and other resources, they did not think of themselves as "owning" them until the very moment at which they were killed.

These ideas about ownership were shown in the names Native people gave to places, which usually reflected these places' agricultural features or else pointed to where plants, fish, and animals could be found. This was a marked contrast to English place names, which tended to reflect the identity of a place's owner. Some Native place names reflected boundaries of territory. However, borders soon became a problem after the arrival of the Europeans, as the two groups of people did not have the same understanding of what land boundaries meant. When Native people negotiated an exchange of land, whoever authorized the exchange had to speak on behalf on the entire kin group who had rights to the land.

Although Cronon doesn't mention it specifically here, this passage illustrates an important difference in the way that indigenous people and Europeans conceptualized their place in the world. Europeans thought of themselves as separate from—and having authority over—the natural world. Native people were more inclined to see themselves as part of the natural world, which from a scientific perspective makes more sense.

Furthermore, Native people believed they were granting the Europeans land rights that were "specific," contingent, and conducive to Native people continuing to practice hunting and gathering. Indeed, the Native system of land rights simply did not include the right to "exclusive" use of land. The Europeans, meanwhile, essentially decided to overrule the Native system of land rights as "not real." When a purchase took place, colonizers interpreted it through the framework of European law only. When colonizers purchased land, they did not believe they were purchasing the rights to use the land in certain specific conditions (per Native law), but rather chose to believe they were buying the land itself. This "inevitably" resulted in significant ecological change.

From a contemporary perspective, it might seem extraordinary that Native people initially allowed colonizers access and use of the land (a little like letting a stranger squat in your house!). Yet as this passage shows, part of the reason why indigenous people were often willing to do this was because of their particular understanding of what it meant to have property rights. They saw these rights as flexible and need-based rather than permanent and thus didn't anticipate Europeans claiming they "owned" the land forever.

It is misleading to assert that only Europeans had a sense of private property whereas Native people didn't. There were actually similarities between the understandings of property held by Native people and those of the colonizers, and the result of their interaction was what tends to be called "the New England land system." Colonizers believed they gained a right to land in two ways: by buying it from Native people or receiving a grant from the English monarch. In their view, the latter was always the ultimate authority. When colonizers purchased land from Native people, it was an exchange between two sovereigns—yet the colonizers would then subsequently choose to ignore Native sovereignty once the purchase took place.

This passage illuminates another important problem in negotiations between Native people and Europeans. While Europeans were willing to concede to Native ideas, laws, and customs to a certain degree, they ultimately only truly respected their own system of authority (manifested in the monarchy). This was not a promising basis for fair negotiation, let alone cooperation.

Over time, the colonizers began to regulate the sale of Native lands and eventually came to conclude that "for Indians to own land at all, it had first to be granted them by the English Crown." Settlers were obligated to pay a kind of rent to the monarch for use of land, but this was often very little. The royal charter also established boundaries that were fixed and "objective," rather than the flexible and contingent kind used by indigenous people. The Massachusetts Bay Company was provided a significant grant of exclusive land use and profit, rights that lasted "for ever." This set of rights was diametrically opposed to Native people's conception of land rights.

By breaking down each step of the process like this, Cronon shows how something extraordinary—a group of people moving to another continent, taking the land for themselves, and establishing their legal system as the only valid form of authority—actually did happen over the course of the colonial period. Of course, there is missing information about how this was actually achieved, which was via ecological and economic factors that are discussed later in the book.

The question of how to divide up the land granted by the King was left to the colonizers to adjudicate. The land in a given town would be permanently divided up among residents. This reflected the colonizers' belief that "individuals should only possess as much land as they were able to subdue and make productive." This meant that a wealthy people who had lots of servants and cattle were accordingly given more land. As a result the class system that existed in Europe was transferred over to the New World. The land ownership granted here was both "permanent" and "private"; colonizers argued that this form of ownership would lead to the land being used in the most effective manner.

One of the myths about colonial life in America that still proliferates in some forms today is that it was to be a classless society, unlike the rigidly hierarchical systems back in Europe. While this was certainly the desire of some settlers—and while there were crucial differences in the class systems in the New and Old Worlds—this passage shows that this fantasy of classlessness was far from the reality.

Some land was held in common; the percentage of private to public land varied from town to town. Yet overall, New England towns were defined by the belief that land was a "private commodity," not publicly shared space. Over time, deeds stopped reflecting what a given piece of land could be used for and instead defined it by its "objective" geographical measurements, with use not mentioned at all. Overall, the colonizers' approach to land was defined by viewing it as a commodity. Of course there is an extent to which is this is a simplistic generalization, glossing over the reality that the colonizers' notions of property evolved over time.

Again, from a contemporary Western perspective, treating land as a commodity might seem like an obvious idea. Contemporary life is significantly shaped by the idea of owning land as property, a concept that manifests everywhere from national broader control to paying rent. Yet this idea is not a natural one and was largely not part of indigenous political ideology.

While compared to later American towns these early colonial settlements may look like "subsistence communities," compared to the Native communities that preceded them they were very much market societies. The towns featured markets where commodities were traded; some good were shipped back to Europe or to the Caribbean and some were taxed. However, the most significant way in which colonial towns differed from subsistence communities is that they were fixated on "improv[ing]" the land, which meant regarding it as capital. Colonizers sought to increase the value of the land they owned by making full use of it, increasing the soil's fertility, acquiring more animals, and so on.

Colonizers regarded it as self-evident that land should be used in a way that maximized profit. This meant that more goods were produced than was necessary for survival, which in turn meant an intensification of activity that wore down the land. Of course, in reality none of this was necessary or even a self-evident good, as the contrast with indigenous ways of life demonstrates.

In *Two Treatises of Government*, John Locke compares indigenous people's way of life to that of Europeans. He points out that Native people acquire what they need to survive and own what they use. In contrast, Europeans seek to accumulate capital, including in the form of land. In the case of colonial New England, the result of this European ideology was a transformation of the environment.

As this passage shows, it is important to remember that an understanding of the differences between European and indigenous ways of life is not only something known in hindsight—people realized it at the time, too, even if their impression may have been distorted by ideology.

Locke argued that Native people had not properly cultivated the land because they were not motivated by "money and commerce," which were not features of their cultures. Yet this analysis missed the reality that Native people were actually *not* impoverished, because they essentially had everything they desired. They did not rush or overwork themselves and lived a satisfying life. However, this depended on having control of the land, which—once the property-obsessed Europeans arrived—was taken from them.

It would be too simple to interpret this passage as meaning that poverty is a state of mind. This is not *the case and when Native people later faced real poverty as a result of colonization, no attitude shift could have mitigated this problem. Instead, the Europeans' inclination toward greed made them mistake having* enough *for having too little.*

CHAPTER 5: COMMODITIES OF THE HUNT

For the first century in which Europeans had settled in Massachusetts, there was actually much cooperation between them and the Native population. Native people traded animal furs and skins for clothing, decorative objects, and weaponry. There is little evidence in the historical record of indigenous people's impression this trade. Yet it is also clear that in the early seventeenth century, Native people regularly approached Europeans seeking trade opportunities. There is also hardly any record of the many Europeans who travelled to America during this period, although other sources confirm that many such people did exist and that many engaged in trade with indigenous communities.

Cronon provides an important note here about the extent to which the historical archive is biased in favor of the Europeans. Due to a number of factors including the systematic destruction of indigenous communities and the fact that Europeans were intent on preserving their own records, there is much more evidence now of what Europeans thought during this time than what Native people did. This creates an unbalanced history.

These European travelers brought the most destructive change to indigenous life in the form of microorganisms that previously did not exist in America. These microorganisms caused diseases such as chicken pox, measles, smallpox, influenza, plague, malaria, and yellow fever, and Native people had no immunity against them. Indeed, colonizers sometimes remarked on the striking absence of disease among Native populations. This all changed, however, as a result of the European presence. When a disease struck a Native village, the initial mortality rate was usually somewhere between 80 or 90%. This triggered "a long process of depopulation" which had dramatic knock-on effects.

The impact of European disease on the indigenous population of America is arguably the most devastating part of the entire history of European-indigenous relations. The staggering amount of death caused by disease shows how Native people became so vulnerable to European oppression and theft.

Because the Native people who interacted with Europeans most were those involved in the fur trade, the northern Natives who disproportionately participated in fur trading were struck by disease first. However, once the diseases reached the much more densely populated southern regions, the impact was even more devastating. The first epidemic to hit the south started in 1616; the disease was likely chicken pox and there were several villages where only one person survived. In a subsequent 1633 epidemic, the mortality rate in some villages was 93%. Native people had essentially no way to defend themselves against these new pathogens. Aware of the high risk of contagion, they were forced to leave family members to die alone.

The horrifying impact of disease described here shows how human and ecological history intertwine, in this case with brutal consequences. The microorganisms that Europeans inadvertently brought with them were natural and Europeans had naturally acquired immunity to them (this was long before the era of vaccines within Western medicine). Yet because of the unnatural act of colonization, Native people were killed in huge numbers by an organic entity.

Disease prevented Native people from being able to hunt and farm properly, leading to starvation which worsened the problem of illness. By 1675, the number of Native people in New England had plummeted from 70,000 to 12,000. This massive change had a tumultuously destructive impact on Native life, as social structures were left in disarray. Those who rose to power during this chaotic time were often people who decided to ally themselves with the colonizers. The forms of medicine that Native people traditionally practiced could not effectively fight foreign disease. Many colonizers, meanwhile, chose to interpret the epidemics as the will of God, who they claimed wanted them to conquer America.

While the colonizers did not initially intend to wipe out the Native population using disease (although this was later incorporated into their assault on the Native population), this passage makes clear that they were generally happy for the disease epidemics to work to their advantage. Indeed, they even chose to claim that this mass death was the will of God, simply because it advanced their personal interests.

Without Native people working the land, it began to very gradually transform. Underwood grew because it was no longer being burned away; crops Native people had cultivated for years died out. The reason why some Native people participated in the fur trade with such seeming enthusiasm—to the point that animals such as the **beaver** ended up dying out—might at first seem mysterious. They certainly did participate, because English hunters were not remotely skilled enough to kill beavers at the rate Native people did.

Part of the problem of having far fewer perspectives of Native people preserved in the historical record is that the behavior of these historical actors can remain mysterious and even baffling. Yet it is important to note that what is obvious in hindsight is never clear to people living in a particular historical moment. Native people could never have predicted the totality of destruction colonization would cause.

There was already an important tradition of trade between different indigenous tribes and when Europeans arrived, the novel goods they had to offer made the prospect of trade very appealing. At the same time, acquiring European tools did not actually have a significant impact on improving quality of life. Many indigenous people ended up repurposing what they had purchased, for example wearing kettles they'd bought from Europeans as jewelry. For some time, corn was used as currency in the fur trade, but it wasn't the ideal entity for this task. A better contender was wampumpeag, shell beads that are today known as wampum.

This passage illustrates how the meeting of two cultures can result in misunderstanding, miscommunication, and the other negative effects of culture clash. Some people may regard the developments described in this passage as exciting examples of cultural innovation. Yet while innovation undoubtedly did take place during this time, ultimately this passage shows that this meeting of cultures was often unproductive—particularly for Native people.

Wampum was a sign of wealth and power and was usually exchanged during important rituals such as engagements or gift exchanges between allies. Europeans therefore believed it could be used as money in their trade with Native people. Wampum quickly acquired extraordinary value for both the indigenous and settler populations. Over time, however, inflation decreased its value. The shifting status of wampum had a profoundly disorienting impact on Native social life, where power and status were already in flux. Moreover, as Native people had acquired European weaponry through trade, many Europeans became concerned about their power. In 1637, these tensions came to a head when colonizers massacred Pequots, before assassinating the Narragansett sachem Miantonomo in 1643.

Again, from a contemporary perspective readers might assume that cash money—or currency in general—is an inevitable feature of human society because it is so widespread in today's world. Yet there have actually been plenty of human cultures that essentially did not use money or currency. Instead, they might engage in systems of direct trade, or use other systems (such as hierarchies of sacred objects) in order to represent and exchange value.

Overall, the fur trade totally revolutionized indigenous life both directly and indirectly. The fur trade created a whole new system of value in indigenous cultures and, for the first time, a motivation to kill more animals than was necessary for survival. As a result, the numbers of particular species began to decrease, particularly the **beaver**. The beaver population steadily decreased and then swiftly declined in the 1670s due to King Philip's War. By the end of the seventeenth century, the fur trade was no longer lucrative. The beaver was far from the only animal that was overhunted during this time and species were further endangered by the destructions of their habitats, which was happening concurrently. Steadily, domesticated animals began to replace wild ones.

The overhunting of beavers and other animals is one of the most obvious and direct ways in which the presence of colonizers was destructive. Indeed, there is something of a paradox in the fact that colonizers originally hunted beavers at aggressive rates because they valued what they provided (fur and skins)—yet in doing so, they managed to eradicate this desired commodity. Indeed, this contradiction is representative of the colonial economy as a whole: the things they most valued were often most vulnerable to destruction via over-consumption.

The elimination of animals such as deer had a devastating impact on Native communities. By the time that large wild animals died out, colonizers were no longer hunting for their food. Native people, however, still depended on the hunt to eat. Some villages attempted to stockpile shellfish in order to make more wampum. There was an overall increase in both intertribal conflict and battles between indigenous people and colonizers during this period. Indigenous ways of dressing changed; by the middle of the seventeenth century, European fabric was the most valuable item that Native people acquired in the fur trade. In the 1660s, the value of wampum steeply declined and eventually the colonizers stopped even counting it as money.

This passage provides a disturbing example of the way in which Native people were forced to participate in the Europeans' economic system, even though this system clashed with the environment and had a destructive impact on Native people's way of life. The way it all happened was gradual and insidious, meaning that it would have been impossible to know where the process was leading at the beginning.

By this point, Native people relied on the markets from which they were now excluded. With fur gone and wampum useless, the only "commodity" Native people could trade was their land. Indigenous community's loss of land to colonizers in the second half of the seventeenth century is the subject of many other history books, so Cronon chooses not to describe it in detail. The overall effect was that Native people had less land to use, which in turn made it more difficult to hunt. By the turn of the eighteenth century some Native communities were dependent on European livestock to eat.

Again, from a contemporary perspective it can be bewildering to imagine why Native people were ever motivated to sell their land to Europeans. Yet as Cronon has shown, the brutal reality was that Native people were forced into this position by the colonizers' transformation of the landscape (and hence of Native ways of life).

Most of what is described above was more true of southern Native communities than those in the north, where there were fewer colonizers and less significant changes to the environment. Not every new form of technology that northern Native people gained from the Europeans hindered their life; for example, the smaller, metal kettles they acquired were more portable than the wooden ones they had been using before. However, there was a shift in attitudes toward private property that had a substantial impact on the northern Native way of life. Land was now something that was owned by a family and inherited, while an increasing reliance on the beaver trade meant that beavers came to be seen as a "commodity of exchange."

As always, Cronon is careful to show that there are always counterexamples to the general trend. Just because colonization overall destroyed indigenous ways of life and made the quality of life for indigenous people worse doesn't mean that there weren't some European technologies that could be usefully incorporated into Native lifestyles. Yet these counterexamples, while important to acknowledge, do not change the overall trend.

However, it was not long before the **beaver** all but totally died out in New England. This had a number of important ecological consequences. Colonizers initially used old dams beavers had made as bridges to cross streams. When these dams eventually collapsed, they left behind mounds of extremely rich black soil formed by layers of rotting wood. This became "ideal mowing ground" for cattle. In this sense, the disappearance of the beaver created ecological conditions conducive to European takeover of the land. By 1800, the encroachment of colonizers and the effect on the landscape meant that Native people did not have any choice but to participate in the settlers' markets. The precolonial world had been lost.

As Cronon mentioned in the beginning of the book, the discipline of ecology emphasizes the interconnected nature of organic systems. Beavers, for example, should not be viewed in isolation but instead as part of complex and fragile ecosystems in which they play a crucial role. Removing the beaver thus has an enormous array of secondary effects because the entire system is thrown off-balance.

CHAPTER 6: TAKING THE FOREST

The population of wild mammals in New England did not just decline because of the fur market, but also because of the destruction of edge habitats. Colonizers were aggressive in cutting down trees for several reasons, among them that timber was one of the first commodities that could be sent back to Europe to be sold. Beginning in the 1630s, commercial lumbering was mostly concentrated in Maine and New Hampshire, where trees far bigger than any species in Europe grew. For the first time, ship masts could be constructed from a single tree rather than joining two different pieces of wood together. A royal charter decreed that the very biggest masts could be used for the Royal Navy only.

In ecology, "edge habitats" are boundary areas where animal habitats meet human ones. In the colonial period, colonizers (logically) cut down trees that were near their settlements, thereby steadily encroaching on the edge habitats of wild animals and contributing to these animals dying out.

The colonizers lumbered as if the forest was an infinite resource, often wasting entire trees in their rush to access the most valuable timber. This continued into the nineteenth century. Similar to how the colonizers saw **beavers**, types of trees came to be seen as commodities, each with a particular value. Over time, certain species began to disappear and parts of the forest became barren. Species that became much rarer include pine and cedar trees. Starting in the 1790s, certain colonizers argued that measures should be taken to protect part of the forest from being lumbered. Yet the main factor leading to the disappearance of trees was not even lumbering—it was actually farming.

This passage serves as an important reminder that colonizers did not have an unrelentingly destructive attitude toward the environment—to claim this would be a massive oversimplification. Some made arguments for preservation (although they would have had many different reasons for doing so and may not have been interested in preserving ecosystems for their own sake). Nonetheless, these deviations from the norm were not enough to protect the land.

After settlements had already appeared on all the land that was already clear, settlers began clearing the forest in order to farm, a process that depleted the fertility of the soil in these areas. Clearing was achieved in two ways, the first of which was girdling, which was slowly killing trees by stripping off their bark, combined with burning undergrowth. This method didn't require much labor and was better for maintaining soil nutrients for longer, but it wasted trees. The dead trees also caused damage when they fell, sometimes even killing people and livestock.

In the age of mass awareness about the dangers of deforestation, it might seem startling that colonizers were so aggressively intent on clearing New England's forests, which had enormous ecological and *economic value. However, it is difficult to overemphasize the importance of farming for these settlers, and this significantly influenced their behavior.*

The second method became increasingly popular over time to the point that, by the late 1700s, it was the only one used. It involved cutting trees down with an ax in summer and leaving them where they'd fallen until the next spring, at which point they'd be burned. This created a single blast of nutrients in the soil that was ultimately less long-lasting. The ash from dead trees was sold as fertilizer, charcoal, and potash, a substance used in soap and gunpowder. Using this method, land could make a lot of money very quickly, which led to forests being destroyed in this manner at significant rates.

During this part of the book, it will become clear to the reader that one characteristic feature of the colonial economy was a preference for immediate profits over sustainability (indeed, this feature is still a part of the economic structure of the world today). This preference often. had long term negative consequences that might not have been clear at the time.

Colonizers imitated the practice of forest burning from Native people, but instead of restricting this to undergrowth they burned the entire forest. This was wasteful, destructive, and dangerous. Laws were passed in order to restrict burning to a given property, with penalties if the fire reached neighboring properties. Rather than abiding by agricultural principles, the colonizers' form of burning conformed to their strict definition of private property. Timber had at first seemed so infinitely plentiful in New England that colonizers used it in an excessive, wasteful manner, to the point that construction came to require untenable amounts of timber. **Fences**, for example, were made of timber, whereas back in Europe they would have been made of hedges or stone.

This passage helps illuminate what people mean when they argue that there is an inherent clash between capitalism and the environment. Non-capitalist cultures, such as those of indigenous people, often organize life around environmental resources and limitations. Capitalism has an entirely different organizing principle (profit) which arguably clashes with environmental realities.

However, the most significant use of timber was as a fuel. This was in part because New England colonizers had open fireplaces, which were very wasteful in comparison to the enclosed stoves popular in Northern Europe. As a result, colonizers burned through a staggering amount of wood. Wood shortages were a common problem and as the forest was steadily destroyed, lumberers had to travel farther and farther for timber. Over time, fuel prices rose enormously. As deforestation proliferated, profound ecological consequences ensued, to the point of even causing climate change. There were more forest fires in spring and deeper layers of soil froze in the winter, which increased flooding. There was also a corresponding drying up of streams and springs.

In the age of climate change, it has become obvious to many people living in the West that an individual human practice (such as having an open fireplace) can have extraordinary consequences for the environment, many of which follow indirect patterns of causation. Yet this was generally not part of the colonizers' worldview.

In other places, however, previously dry land got turned into swamps, which led to disease caused by the mosquitoes that proliferated around poorly drained areas. As the land became drier, those working in sawmills found that there was not enough water to keep the mills functioning. Together, these consequences highlight how drastically the deforestation committed by colonizers transformed the New England landscape. Europeans, however, chose to interpret deforestation constructively—it was their way of transferring their "old and familiar way of life" into the New World.

Again, part of the reason why colonizers might not have immediately been aware of the negative consequences of their practices is that when they saw the land changing, they chose to interpret this as a positive thing. Claiming that they had been divinely commanded to "tame" and "civilize" the American landscape and make it more similar to Europe, they misperceived the results of what they were doing.

CHAPTER 7: A WORLD OF FIELDS AND FENCES

There were actually some similarities between Native and European forms of agriculture, such as the way they followed the cycle of seasons in largely the same manner. However, there was a stark contrast in the way the two groups approached animals. Whereas Native people hunted wild animals, Europeans kept domesticated grazing animals. Although there was initially very little livestock in New England, this changed over time and was perceived as an encouraging indicator of the region's wealth. Pigs and cattle were hugely important to colonizers, providing meat, dairy, and leather. Oxen were used to work the fields, whereas sheep supplied wool. Crucially, each of these animals was *owned* by a person, which was not the way that Native people related to animals at all.

Again, the idea that an animal could be owned by a person was antithetical to the way that Native people related to the environment. Although it is not discussed here, it is perhaps worth noting that this clash of ideas over whether an animal could be owned took place alongside the rise of slavery, which was a system predicated on the idea that a person could be owned as a commodity. In this way, the horrifying example of slavery can help readers understand how extraordinary (and arguably unnatural) European ideas about owning animals actually were.

Conflicting understandings of whether animals were property led to disputes over Native people supposedly stealing animals that colonizers claimed belonged to them. Sometimes, Native people would use colonizers' understanding of property rights against them by arguing that colonizers' animals had damaged Native crops (reasoning that a person was responsible for the actions of their property). Native people were theoretically given a legal right of redress in response to this, but in practice these rights were difficult to put in place. Colonizers also made Native people responsible for maintaining **fences** separating their land from others', arguing that if these fences were improperly maintained colonizers could not be blamed for their animals damaging others' land.

The fact that Native people ended up attempting to use European understandings of property rights in order to achieve redress against European infringements shows that Native people were not passive when it came to reacting to colonialism. Indeed, Native people adjusted in flexible and skillful ways.

There was also a problem of predators such as wolves killing colonizers' livestock. As a result, colonizers offered a bounty for the heads of wolves, giving these animals a "value" in the same way **beavers** acquired value during the fur trade. At times, wolf-hunting became extremely aggressive and was used as a reason for draining swamps (where wolves were believed to take shelter). As a result, the number of wolves began to dwindle. In addition to all the tensions and conflicts already mentioned, there was also an intense amount of conflict between colonizers themselves regarding the keeping of animals. Legal rulings were designed to help protect crops from neighboring cattle, but again farmers were forced to maintain **fences** if they wanted these rules to be enforced.

The conflict that occurred between colonizers again highlights how different their way of life was from that of the indigenous population. The ideology of private property and the individual accumulation of capital encouraged people to work against rather than in cooperation with each other. This led to conflicts that were on the one hand petty and unnecessary and on the other sometimes devastatingly destructive.

Regardless, even a functional **fence** could be easily mowed down by a large animal, leading to a need for "fence viewers" to assess that the fences were solid. Overall, this all had the effect of making the boundaries between different areas of private property starkly pronounced. Meanwhile, pigs so easily caused damage to crops that legal permission was granted for a person to kill any pig that wandered onto their property. Indeed, pigs were the single biggest cause of recorded conflict between colonizers. Sometimes pigs were driven to the edge of town, but this then caused conflict *between* towns. As a result entire towns were given a kind of collective responsibility over the behavior of the animals. Eventually, pigs were kept confined within enclosures.

The story of how pigs came to be kept in enclosures shows how the idea of animals being property gradually crystallized into more extreme (and unjust) forms. At first, colonial farmers treated pigs largely as a possession but also somewhat as a wild animal, letting them roam freely. However, when this interrupted the way of life they were attempting to establish, pigs were treated more like possessions and less like living beings, beginning a long process that has eventually resulted in the factory farms of today.

Before long, the same was true of other animals, such as horses, sheep, and cows. Land was divided by **fences** and animals were kept in their own respective enclosed sections. Furthermore, whereas in earlier times colonizers adjudicated the division of land communally—based on which parts were best suited to which agricultural purpose—overtime this was overtaken by an abstract emphasis on property, which was not based on environmental factors.

This passage shows another way in which land was divided up into artificial monocultures (a term usually used to describe the growth of one crop in a given area). Whereas in nature different species of plants and animals intermingle together, monocultural agriculture means that they are kept separate.

Livestock were highly important within colonial society due to their status as commodities. Owning domesticated animals was "one of the easiest ways for a colonist to obtain hard cash with a minimum of labor." The result of the expansion of livestock ownership was the clearing of forests to create grazing areas and the subsequent wearing out of these areas. Further land was destroyed building roads that led to the port cities where animals were sold at markets. It was thanks to such markets that colonial agriculture expanded so much; animals were the most common commodity brought to be sold at them.

This passage illuminates part of why keeping livestock was so important to colonizers—it was an enormous source of profit. Indeed, not only was it profitable, but it fulfilled the fantasy of "laborless profit" that many colonizers had come to associate with the New World.

The aggressively expansive nature of colonial agriculture had a destructive impact on the environment. Soon there was far more livestock than grazing land to feed the animals and this lack of land caused intense conflict between towns. Moreover, the natural grasses that grew in New England were steadily being replaced by species from Europe. During this time there was also a proliferation of European weeds such as dandelions, bloodworts, nightshades, and nettles. Native people were aware that foreign plant species were suddenly invading their land. In order to rid the land of weeds, settlers often burned the undergrowth, then letting their livestock graze, a practice that had several unwanted ecological consequences.

The weeds that Europeans brought over from the Old World were problematic not only because, as weeds, they were a nonvaluable part of agriculture, but also because they were foreign species. This meant that they interacted with the rest of the ecosystem in a way that could be highly destructive.

Whether or not a plant species invaded a given patch of land largely depended on whether there were animals grazing on it. As a result, livestock significantly reshaped the makeup of the New England landscape. Ironically, the presence of grazing animals often ended up shifting the land such that the plants on which the animals fed stopped growing there. Ploughing the land with horses and oxen also had significant long-term effects. It allowed a single farmer to work a much larger area of land. Unlike Native people, Europeans would continue to farm the same piece of land rather than moving on after a number of years, which intensified the wearing out of the soil.

This passage re-emphasizes the way that European political ideology led to destructive effects on the environment. Capitalism encouraged and enabled colonizers to permanently own large amounts of land. While this increased profit, it ended up having a negative impact on the land itself. Again, this is the contradiction of the colonial (and indeed capitalist) economic system.

During this time, there was a surge in sediment deposited in ponds and lakes, while across the region land became less fertile. Changes to the earth during this period were summed up by two processes: drying and erosion. The drying up of bodies of water had many secondary effects on local economies. In places covered in sandy soil, the combination of ploughing and livestock exposed deeper layers of the ground to wind, which contributed to further erosion. The combination of deforestation, grazing, ploughing, erosion, and changes to water levels meant that soil exhaustion became an "endemic" problem across New England during the colonial period.

This passage further explores the way in which, within an ecosystem, one process—such as deforestation—is inherently linked to many other processes—such as soil exhaustion and the disappearance of water. All these negative effects combined resulted in the ongoing problem of soil exhaustion, which meant that less and less land could be cultivated.

The colonizers' more intensive farming of the land, combined with their preference for monoculture, exhausted the soil in a way that Native agriculture never had. The colonizers' practices drained the soil of nutrients and farmers were already complaining of soil becoming unfit for cultivation in the early seventeenth century. Moreover, because livestock were generally left to wander across the land, farmers were unable to collect and use their manure as fertilizer. As a result, farmers chose to use fish instead. This did help extend the fertility of the soil, but it had several drawbacks, including producing a horrifying smell. Moreover, overfishing meant that fish ultimately became an unreliable source of fertilizer.

Readers might assume that it was only later on that settlers came to understand the negative impact of their farming practices on the land (or even that the real problems didn't start until industrialization). However, the truth is that as early as the beginning of the seventeenth century, farmers were on some level aware that what they were doing was having a negative impact on the land and restricted their ability to continue cultivating it.

With neither manure or fish, some farmers relied on ash, but this carried the problem of "destroy[ing] the forests for the benefit of fields." A lot of wood needed to be burned in order to produce enough ash for fertilizer. Furthermore, the colonizers unintentionally created ideal conditions for the pests they had (again, unintentionally) brought over from Europe, such as the Hessian fly, which had a devastating impact on wheat production. Other "migrant" pests included the black fly, the cockroach, the grey rat, and the honeybee (although this final species was a much more "benign" presence than the others).

This passage is a reminder of how much of the colonizers' impact on the land was unintentional and harmed them just as much as it harmed indigenous people. It is not as if colonizers intended to negatively impact the land in the way they did. The problem lay in the fact that the political economy that motivated them was inherently environmentally destructive.

Some pests had already been in New England in precolonial times but underwent a dramatic increase in numbers due to the shift to colonial agriculture. These included caterpillars, grasshoppers, garden fleas, and maggots, all of which could have a highly destructive impact on crops. The most serious destruction, however, was caused by a fungus called black stem rust, which had been brought over from Europe in the early 1660s. Black stem rust, nicknamed "the blast," could destroy an entire town's wheat production. Colonizers soon realized that the blast had been brought over on barberry bushes, another weed that had migrated with them from Europe.

This passage again emphasizes how much the colonizers' impact on the land had negative results for them as well as for the other inhabitants of the landscape.

By the end of the eighteenth century, it was common for swamps and salt marshes to be drained and meadows irrigated, which led illnesses carried by mosquitoes to become a more prevalent part of life. Deforestation intensified as fuel demands increased. Yet the greatest change was still to come with the Industrial Revolution. In the nineteenth century, densely-populated cities would arise. The landscape changed so much between the colonial period and the present that it can be difficult to remember how much the colonial era *itself* brought a dramatic transformation of the land compared to precolonial times. Before industrialization, colonizers had already revolutionized the landscape into "a world of fields and fences."

Here Cronon clarifies part of why it is important to focus on the environmental transformation caused during the colonial period. Because industrialization caused changes that were in many ways more obvious and dramatic, people might be inclined to attribute almost all of the changes that took place in the American landscape to this process. However, as Cronon has shown throughout the book, the truth is that the process started much earlier than that.

CHAPTER 8: THAT WILDERNESS SHOULD TURN A MART

By 1800, the Native population of New England had dwindled while the number of colonizers soared. Indigenous people's way of life had been destroyed by the transformations triggered by the colonizers and they constantly faced the issues of disease and malnutrition. Animals that had once been abundant had disappeared, as had many species of tree and the amount of forest in general. As a result of deforestation, the region was drier, with more extreme temperatures. There was mass soil exhaustion as well as a whole new group of pests and crop diseases.

In the final chapter of the book, Cronon summarizes what he has argued thus far. Taking a broad view, he shows how all the processes of change he has depicted are interconnected, which helps show how such enormous change could occur through a lot of very complex, local, gradual, and nuanced processes.

Comparing the New England landscape of 1600 to that of 1800 implies that European colonization was *the* factor behind the enormous transformation that happened during this period. There are many ways in which this is indisputably true. Furthermore, because capitalism drastically intensified during this period, it might be tempting to attribute all the dramatic ecological change that occurred during that time to this socioeconomic shift. Yet there is an extent to which this correlation can be misleading. Some of the ways in which Europeans ended up transforming the land were not primarily economic—for example, the European diseases that colonizers brought over with them. While economic factors intensified the devastation that resulted from these diseases, the diseases themselves were arguably not an economic issue.

Although Cronon is speaking factually here, there is an extent to which this section of his argument is purely ideological. While it is true that something like the microorganisms causing European diseases were not caused by capitalism, it was capitalist forces that drove them (carried by European colonizers) to America. Indeed, the question of how much the changes described in the book are a result of capitalism are to some extent a matter of political perspective.

Similarly, the changes caused by livestock were clearly related to capitalism, but Europeans had been keeping livestock for centuries before capitalism's rise. Yet while many of the changes that colonization triggered could not *solely* be attributed to capitalism, it is also true that "economic and ecological imperialisms reinforced each other." Native people were keenly aware of this reality. In 1642, the Narragansett sachem Miantonomo compared the land of plenty that had existed in the time of the ancestors with the depleted, apocalyptic reality that lay before his people in the present. Using a variety of different methods, Europeans had seized Native land as their own. As a result, those who had initially welcomed Europeans to New England began to resist their presence.

Here Cronon largely returns to a political interpretation of the land transformation that occurred during the colonial period by emphasizing how this transformation was largely triggered by political and economic factors. While the truth of why the land changed so much is not straightforward, it does have a single and rather obvious core cause, which is the colonization of the landscape by Europeans who were acting according to capitalist principles.

Miantonomo argued that successful resistance would require "pan-Indian unity." Yet alongside resistance, Native people also adapted to the new way of life brought about by the colonizers. They changed the way they hunted and farmed and also introduced new forms of social and political organization. Essentially, the way of life of their ancestors had been made impossible. At the same time, Native people generally kept themselves resolutely distinct from Europeans rather than assimilating into colonial society. Indeed, focusing on European colonizers as the primary forces in transforming the landscape risks underemphasizing the agency of Native people. The truth is that Native people were neither changeless nor "passive," but active agents of history even as they faced intense suppression from the colonizers.

Although it is not the main focus of this book, many other works of historical scholarship examine how Native people both actively resisted European colonization and attempted to adjust their lives in order to survive in the new paradigm that the Europeans introduced. These two truths show that Native people were important historical actors who also had to deal with brutal restrictions on their agency imposed by the Europeans and an assault that ultimately amounted to genocide.

The Native people who remained in New England found themselves forced into reservations on subpar land and deprived of access to animals for hunting and fishing. While ecology explains why Native people ended up being unable to survive on this depleted land, political history is necessary to show why colonizers first put them onto these lands. The assassination of Miantonomo by the colonizers shows what Native people who attempted to resist colonial power faced in return.

Here Cronon returns to the question of why combining ecological with human history is so important—the two are inherently interlinked and thus the history of humanity must always factor in the many complex ecological factors that determine human behavior.

Overall, while the transformations to the land that occurred during the colonial period were indeed "multicausal," there is no doubt that the escalation of capitalism during this period was the primary factor in triggering it. It could be argued that the biggest contrast between Native and European people lay in how they conceptualized the land and its "resources." Whereas Native people did not tend to *accumulate* resources, accumulation of resources, commodities, and profit was the driving motivation behind the colonizers' lives. Under this logic, there was no limit to how much a person "needed."

Here, Cronon provides a crucial reminder that capitalism did not just arrive in America fully-formed—it intensified there in a way that significantly shaped the changes that occurred in the landscape. This increased the gulf between Native and European ways of life even further.

Of course, the process by which this political ideology transformed the landscape was gradual and often indirect. Furthermore, colonial economies themselves went through massive transformations between 1600-1800. From the crystallization of property principles to an increase in the degree of profit farmers could expect to make, colonial economic life evolved dramatically during this period. As these tumultuous shifts took place, resources were frequently squandered and areas of land destroyed. Everything about the way the colonizers farmed was based on treating land both as "permanently abundant" and as capital. This was completely inconducive with Native ways of living on the land.

Beyond these clashes with the land's indigenous inhabitants and their way of life, the colonial economy was also "ecologically self-destructive." Colonizers treated the land's resources as if they were infinite, only to be made starkly aware that this wasn't the case. Again, while the most dramatic changes to the New England landscape are often thought to have taken place in the nineteenth century, it is important to remember how enormously the land changed during the colonial period, too. Colonization transformed both the social world of New England and the ecological one. The impact on the land was destructive, as "the people of plenty were a people of waste."

At the very end of the book, Cronon hints at the long-term consequences of colonial changes to the land in more stark terms that he has done through most of the book. He acknowledges that the impact of colonizers on the landscape was very damaging and had effects that could not be undone.

The very end of the book subtly helps the reader make connections between the colonial period and the issues facing the U.S. (and indeed the world) in the present day. The process of ecological destruction that began occurring during the age of Empire is ongoing in the present and the question of how to approach the climate crisis can be usefully informed by looking at the history of colonial ecological change.

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