

LEO MARX'S LEGACY

Copyright 2023 The Author(s)



Creative Commons License
This work is licensed under a
Creative Commons Attribution-
NonCommercial-NoD-
erivatives 4.0 International
License.

Abstract: An assessment of Leo Marx's career, from his youth in New York and Paris, Harvard education, and military service in World War II, to the major themes in his scholarship during 65 years of teaching at Minnesota, Amherst College, and MIT. Best known for his *The Machine in the Garden*, Marx was one of the founding scholars of American Studies, but he also made seminal contributions to the History of Technology and the environmental humanities. His work is a useful legacy for scholars assessing technological solutions proposed to deal with ecological crises.

Key words: American Studies, biography, environmental humanities, Harvard, historiography, Leo Marx, literature, MIT, nature, pastoralism, technology

Leo Marx, one of the founders of American Studies, passed away on March 8, 2022. He taught for 65 years, at the University of Minnesota, Amherst College, and MIT, where he continued co-teaching a seminar until he was 95. This essay examines his cultural context, education, central concepts, and influence. The focus is not only his most famous work, *The Machine in the Garden*,¹ but also the later publications. Marx made an important contribution to the study of civil religion.² He co-edited books on the railroad in American art and on the history of technology,³ and when 80 he co-authored, *Earth, Air, Fire, Water: Humanistic Studies of the Environment*.⁴ Early American Studies scholars took considerable interest in technology and in landscape, but after c. 1975 the field shifted its focus, and Marx was more influential in other disciplines, particularly in departments of Science, Technology and Society (STS).⁵

Marx also helped to develop and define American Studies outside the United States.

1 Leo Marx, *The Machine in the Garden*. (New York: Oxford University Press, 1964).

2 Leo Marx "'Noble Shit:' The Uncivil Response of American Writers to Civil Religion in America." *The Massachusetts Review* 14: 4 (Autumn, 1973), 709-739.

3 Susan Danly and Leo Marx, eds. *The Railroad in American Art* (Cambridge: MIT Press, 1988).

4 Jill Ker Conway, Kenneth Keniston, and Leo Marx, *Earth, Air, Fire, Water: Humanistic Studies of the Environment*. (Boston: University of Massachusetts Press, 2000).

5 See David E. Nye, "The Rapprochement of Technology Studies and American Studies." 2010, ed. John Carlos Rowe, *A Concise Companion to American Studies*. Vol. 1. Oxford: Wiley-Blackwell, 320-333.

He spent a Fulbright year in Britain in the 1950s, and during the next half century he lectured at universities in Germany, France, the Netherlands, Spain, Italy, and Scandinavia, including several visits to Denmark. As Philip Gleason has argued, the origin of American Studies abroad is closely related to World War II.⁶ Before 1945, few European universities offered courses on the United States. During the Cold War, the Fulbright Program sent thousands of scholars on transatlantic exchanges, including many in the new field of American Studies. The field developed rapidly in Europe after c 1950, and Leo Marx was a central figure in that history.

Education

Marx was born on a kitchen table in Manhattan in 1919, and he grew up in New York City between the world wars. At first, the family benefitted from the booming economy of the 1920s, but in 1925 their situation became less stable after his father's sudden heart attack and death. For the next eight years his family moved peripatetically between various rented apartments in New York and Paris, where his mother's sister lived. She had married a veteran of the Great War who had been awarded the *Croix de Guerre* and later became a director at the Ritz Hotel.⁷ Young Leo attended French public schools in 1926 and during several other years as late as 1934.

6 Philip Gleason, "World War II and the Development of American Studies," *American Quarterly* 36, no. 3 (1984).

7 I am indebted to Professor Marx for sharing information about his early life.

He was too young to frequent the famous Ritz bar, where he might have seen Fitzgerald or Hemingway. But he became fluent in French and acquired some understanding of European life and manners. In New York, he attended George Washington High School at 181st Street, and on graduation he was admitted to Harvard College.

As a freshman, he studied a core curriculum that emphasized the western tradition from ancient Greece to the late nineteenth century, both in history and in literature. When it came time to choose a major, he selected a Harvard program that combined English literature and history. In those days, American literature was a small part of the curriculum, and he was first immersed in British literature from Beowulf to the Victorians. But he soon found himself drawn to American literature and particularly to the teaching of F. O. Matthiessen. This was before Matthiessen published *American Renaissance*, which was as important to American Studies in the 1940s as Marx's work would be a generation later.⁸ (In 1983 Marx wrote an affectionate reconsideration of Matthiessen that reveals much about their relationship.⁹) On the history side, Leo had a thorough grounding in US history from the Puritans to the New Deal. The teacher who influenced him most was Perry Miller, whose work transformed the understanding



Portrait of Leo Marx in his prime.

of the American seventeenth century and demonstrated how fundamental the Puritans were to comprehending American culture. Marx would combine ideas from Matthiessen and Miller in *The Machine in the Garden*. Matthiessen traced a pattern of themes, symbols, and problems that energized major American writers of the nineteenth century, developing a form of close reading that kept the cultural context in view. Miller helped Marx to see the connections between the Puritans and the nineteenth century, as later explained in Miller's justly famous *Errand into the Wilderness*.¹⁰

8 F. O. Matthiessen, *American Renaissance*. (New York: Oxford University Press, 1941)

9 Leo Marx, "Double Consciousness and the Cultural Politics of F. O. Mathiessen," *Monthly Review*, Vol. 34, No. 9: February 1983.

10 Perry Miller, *Errand into the Wilderness* (Cambridge: Harvard University Press, 1956).

Marx completed his BA in history and literature in 1941. Before he could go on to graduate school, he served in the Navy during World War II as the captain of a 110-foot wooden-hulled, twin-engined submarine chaser. While cruising the Pacific doubtless made him a better reader of Melville, this may not have been the most important aspect of that experience. In the Navy he had to get along with a wide variety of people. Anyone who met him in later life could see that he had the common touch. He could meet anyone and have an interesting conversation. He never condescended or put on airs. Perhaps he was always like that, but the Navy gave him a broad experience of human nature. He and his fiancé Jane Pike, a Radcliffe graduate whom he married in 1943, exchanged hundreds of letters which record their wartime experiences. One hopes the family will make them available to scholars.¹¹

After the war, Marx returned to Harvard to begin a Ph.D. On his first day back a new faculty member, Henry Nash Smith, asked him to be his teaching assistant. This was four years before Smith published *Virgin Land*, a work closely related in theme to Marx's dissertation, which later evolved into *The Machine in the Garden*.¹² Smith was interested in popular novels and the mythologies they expressed. He saw Mark Twain, for example, as

a writer who emerged out of popular culture and synthesized it with elements of high culture to create a distinctly American form of writing. The two men became close, and one might claim, a bit reductively, that the so-called "myth and symbol" school originated at Harvard when Matthiessen, Smith, and Marx were there together in the late 1940s.

Context

When Marx arrived at Harvard as a freshman in the late 1930s, one of the first things he did was to join a protest against General Franco, in support of the Republic in the Spanish Civil War. He was on the left side of New Deal politics, and he remained consistently on the Left throughout his life. He once remarked that his family is distantly related to Karl Marx, a connection that clearly pleased him. One of his teachers at Harvard, Daniel Boorstin, was a member of the Communist Party in the late 1930s, and Matthiessen was a socialist. (He was also a homosexual, but no one then spoke of it.) These Harvard academics were not a doctrinaire card-carrying cadre of the Communist Party, however. They believed in evolutionary change toward a socialist welfare state, and such a state seemed to be emerging during the New Deal. From that perspective, this evolution slowed during the Eisenhower era, but it seemed to revive during the 1960s.

To put this another way, Marx belonged to a hopeful generation who thought the forces of history were moving toward a better world. They were not naïve. They had lived through the Depression and World War II, and

11 These letters remain with the Marx family. Most of his papers are archived at MIT: <https://archivesspace.mit.edu/repositories/2/resources/1161>

12 Henry Nash Smith, *Virgin Land*. (Cambridge: Harvard University Press, 1950).

during Marx's graduate training the Red Scare began and carried on for the better part of a decade. In the convoluted paranoid thinking of the time, someone like Marx who was on the Left before the wartime alliance with the Soviet Union was considered "a premature anti-fascist." Despite McCarthyism, American history seemed to that generation to be a story of growing equality, greater prosperity, and more inclusiveness. That generation strongly believed in the value of education to open the doors to personal success and in the power of education to effect social change. Marx was Jewish, which meant that European members of his extended family had been in danger of being sent to concentration camps. Moreover, Jewish people in America during the 1920s and 1930s experienced open discrimination. They were excluded from certain clubs, and universities had Jewish admission quotas. A comedian could then get a big laugh if he told a Jewish joke. This situation was changing for the better before World War II, but every Jewish intellectual had thought about the injustice of discrimination, and this helps explain why Jewish academics generally supported the Civil Rights Movement, including American Studies scholars like Marx, Alan Trachtenberg, Allen Guttman, Daniel Aaron, Oscar Handlin, Bernard Bailyn, Richard Hofstadter, Alfred Kazin, Larry Levine, and Irving Howe. They were drawn to American Studies and more specifically the subjects of slavery, persecution, immigration, and economic inequality. Such ideological positions were hardly cost-free in the conservative 1950s. One reason Marx took his first full-time teaching position

at the University of Minnesota was that it was a liberal university that consistently defended free speech. He taught there from 1949 until 1958.

At that time, in English departments the New Critics were in their ascendancy. Marx was not one of them, but he shared some of their preferences. He was trained to make close readings and to respect the integrity of the literary text, and Marx was never drawn to the biographical fallacy, in which works of literature are explained largely through reference to the author's life. In teaching American literature, he seldom spent much time on biographies of individual authors. But he argued that to understand literature the cultural context had to be considered. He also made a point of including the study of African American literature in his teaching, showing for example that pastoralism was an important element in Richard Wright's autobiographical *Black Boy* or in Ralph Ellison's *The Invisible Man*. He studied how certain tropes, symbols, and images persisted from one writer to the next, an idea that later would be called "intertextuality," and he showed that this practice bridged cultural divides of race, class, and gender. Marx never accepted the idea that particular symbols were basic to all story telling or the idea that the key to understanding literature lay in Jungian or Freudian psychology. He did not embrace any universalizing theory that claimed to be valid for all cultures. Rather, Marx argued for cultural specificity. The pastoral in ancient Rome was not the same as the pastoral in eighteenth-century Britain or the pastoral in nineteenth-century America. He

had learned from Miller and Matthiessen that history mattered and that cultures differed. The literary work was best treated not as the expression of one life but as a cultural and historical text.

Concepts

Consider then Marx's publications as studies of long-term cultural patterns. What remains useful in this work? At least five aspects remain vital today for American Studies.

1. The first is the value of an interdisciplinary approach. *The Machine in the Garden* is not about literature alone. It gives considerable space to political speeches by George Perkins Marsh, Daniel Webster, and Edward Everett, to Thomas Jefferson's writings on landscape, and to the *Report on Manufacturers* prepared by Alexander Hamilton and Tenche Coxe. Those who criticize Marx for focusing on canonical literature misrepresent his work. There is also a section analyzing the meaning of alienation in the works of Karl Marx and Thomas Carlyle, and the application of this concept to US society in the nineteenth century. Marx also drew on the works of Freud and Erich Fromm. And to explicate the idea of pastoralism, Marx went back to Virgil and to poetic conventions in British literature. He also included a knowledgeable discussion of American landscape paintings. He anticipated what later research on the environmental crisis demonstrated, that working in isolated disciplines is inadequate to deal with broad topics such as nature or technology, which are better comprehended using an interdisciplinary approach.

2. Literature has consequences. The early American Studies movement realized that literature was not a mirror of society. Drawing on the then new field of anthropology, its scholars argued that each culture has central narratives – or myths – that knit society together and express its core values and central contradictions. *The Machine in the Garden* concerns narratives of the conflict between new technologies and nature. That conflict of values and ideas has further intensified, and Marx's analysis can easily be extended to analyze literary works written decades after it appeared. For example, Louise Erdrich's novel, *Tracks*, contains a central scene in which a logging company cuts down the forest inhabited by a Native American tribe.¹³ To the loggers, trees are a resource to be exploited, and they move relentlessly from one site to another, leaving ruined land behind. The Native Americans see the forest as their home, a living ecological system of which they are a part. This conflict of the machine in the garden, told from the Native American perspective, shows how dominant cultural narratives have extra-literary consequences. It is the scholar's duty to write and teach with this understanding in mind. Recurrent stories express intractable cultural contradictions. People act in accord with the narratives they believe in, as also is the case in the conflict over the existence of global warming.

13 Louise Erdrich, *Tracks*. New York: Harper and Row, 1988. Discussed in David E. Nye, *America as Second Creation* (Cambridge: MIT Press, 2003), 88-90.

3. Landscape is not neutral; it expresses moral values. Jefferson knew this, as did Emerson or Willa Cather or F. Scot Fitzgerald. Marx's essay on "The American Revolution and the American Landscape" remains thought-provoking,¹⁴ and its line of thought is further developed in a late essay that shows how landscape ideologies may pander to the desire to separate culture from nature.¹⁵ Marx's work can also inform studies of how computer programs seek to copy and/or replace nature, creating digital worlds with a morality embedded within them. The landscapes of on-line gaming provide a simplified vision of human history, in which military strategy is central. There are values and narratives embedded in computer games such as SimCity, in the digitized presentation of new houses by real estate agents, or in virtual reality. These landscapes restructure human relations and naturalize the domination of what remains of the natural world. In short, landscape has become an even more central concern than it was in 1964 when *The Machine in the Garden* appeared.

4. Moreover, Americans typically have not one conception of landscape but shift between contradictory conceptions, depending on

context. As Marx explained it in 1988, "the outlook of any individual also may be said to consist of several overlapping, partly conflicting belief systems" that are in a constant dialogue. Culture is not unified but pluralistic, and its "multilayered, fragmented character has made problematic the very existence of anything like a single, coherent, unified, national culture."¹⁶ With this understanding in mind, Marx wrote "The American Ideology of Space" that outlines the three contrasting conceptions of primitivism, pastoralism, and utilitarianism.¹⁷ Most Americans at times idealize wilderness, or untouched nature, which in the 1960s led to the creation of "wilderness areas" where no roads, houses, or permanent human presence is tolerated. Establishing a bureaucracy to preside over wilderness might seem self-contradictory, but the designated wilderness areas in the United States are larger than Germany and Belgium combined. Yet even though many Americans champion wilderness, the dominant conception of nature is utilitarian, treating nature as raw material awaiting exploitation and improvement, in mines, dams, highways, and other building projects. This utilitarianism was inscribed on the landscape, in the form of the grid system of land division that commodifies the entire nation as identical

14 Leo Marx, "The American Revolution and the American Landscape," delivered as a lecture at the University of Virginia in 1974. Available at <https://www.aei.org/wp-content/uploads/2016/03/BicentenUSA11.pdf?x91208>

15 Leo Marx, "The Pandering Landscape: On the Illusory Separateness of American Nature." *Nature's Nation, Revisited: American Concepts of Nature from Wonder to Ecological Crisis*. Amsterdam: VU University Press, 2003, 30-42.

16 Leo Marx, "Introduction," in his *The Pilot and the Passenger: Essays on Literature, Technology, and Culture in the United States* (New York: Oxford University Press, 1988), x-xi.

17 Leo Marx, "The American Ideology of Space," *Denatured Visions. Landscape and Culture in the Twentieth Century*. (New York: Museum of Modern Art, 1991), 62-78. See also Leo Marx, "The Idea of Nature in America," *Dædalus* 137:2 (2008), 8-21.

squares. Attempting to find a compromise between the extremes of wilderness and utilitarianism, many Americans want to live in what Marx termed the pastoral middle landscape. When surveyed, a majority say they prefer to live in a small town or in the countryside, even if many must settle for suburbia. Marx's essay suggests how these three incompatible conceptions of nature are expressed in conflicted landscapes.¹⁸

5. Another of Marx's fruitful concepts is that of the "technological sublime," discussed for 12 pages in *The Machine in the Garden*, and ten pages in Perry Miller's *The Life of the Mind in America*.¹⁹ It proves useful when trying to understand why a new technology could strike a crowd dumb with awe, for example when seeing for the first time a railroad, a skyscraper, or an airplane.²⁰ Americans were not the only people awed by such experiences, but they sought out and celebrated them, and they made the technological sublime central to their national identity.²¹ One might argue that it became a form of false consciousness, a kind of hubris. The power and the complexity of the machine became a trope for the power of the nation, and the

triumphs over space (for example in bridges, dams, skyscrapers, and rockets) seemed to exemplify not only the force of human reason and its ability to subdue nature, but also the greatness of the United States. The technological sublime remains a vital part of American culture, and during the last quarter century it has emerged in the guise of virtual reality, advanced telescopes, drone photography, and extraterrestrial rovers.²²

In summary, Marx pushed American Studies to be interdisciplinary, to understand literature as an expression of cultural values, to study landscapes as conflicted ideological expressions, and to examine the ways that technologies embody fantasies of power.

Teacher

I first heard about *The Machine in the Garden* when a freshman at Amherst College. It was reviewed in the local newspaper, and I bought it as a Christmas present for my father, as he was interested in the history of technology. I did not expect to read it myself, and I did not take a course with Leo Marx until the following year.

Amherst College prides itself on a low student-faculty ratio, but Marx's survey of American literature was so popular that he taught in the largest lecture room on campus. About 150 students took the course every year, and since the college admitted 300 freshman each year, that meant about half of all Amherst students took his course.

18 See David E. Nye, *Conflicted American Landscapes*. (Cambridge: MIT Press, 2021).

19 Marx, *The Machine in the Garden*, 195-207; Perry Miller, *The Life of the Mind in America*, (San Diego: Harcourt Brace Jovanovich, 1965), 295-306.

20 David E. Nye, *American Technological Sublime*. (Cambridge: The MIT Press, 1994).

21 David E. Nye, *Seven Sublimes*. (Cambridge: The MIT Press, 2022), 20-30.

22 Ibid., 136-138, 148, passim.

Marx was a compelling speaker who did not tire you out. The more you listened, the more interested you became. He had a mesmerizing voice and a deceptively informal style. He began by speaking almost conversationally, but gradually his tone became elevated. He became dramatic, especially when reading passages from Whitman, Melville, or whatever author was under discussion. His explications became passionate. Many people read his work because he was a fascinating speaker, and it would be difficult to find a professor of American literature who heard him speak and subsequently never read *The Machine in the Garden*. The obituary for Marx in *The New York Times* quoted Harvard Professor Lawrence Buell, himself a seminal author on ecology and literature, who declared *The Machine in the Garden* to be "the best book ever written about the place of nature in American literary thought."²³

In his survey course, Marx lectured on the Puritans, natural depravity, attempts to define "what is an American," the pastoral dreams of the new republic, Thoreau's theory of civil disobedience, the madness of Ahab in *Moby Dick*, and Whitman's barbaric yawp heard over the rooftops of the world. To students, this literature also seemed to be a meta-commentary on the 1960s, though these connections were not Marx's focus. The Pentagon generals fixated on the domino theory and Vietnam were our Ahabs. The

leaders of the Civil Rights and anti-war movements were our Thoreaus, and Bob Dylan was our approximation of Whitman. Our best hope, it seemed, was to survive the coming apocalypse as the Ishmaels of our generation. The survey course made such an impression that Marx's seminars were oversubscribed. Marx refined his writing through teaching. The ideas had first been nurtured at Harvard in the 1940s, but he continually reworked and refined his thoughts. In seminars he presented close readings of texts and refined them in dialogue with students. He was a good listener as well as an inspiring speaker, and he often began a seminar by gathering questions from the class and then organizing them into an outline. This is harder to do than it looks. Through dialogue, he found compelling ways to make his arguments. He was not forced to rush into print to get tenure, as is the unhappy practice today. *The Machine in the Garden* became a landmark book partly because its arguments were honed in the classroom, and because he was able to give it time. Aside from that book, his forte was the carefully crafted essay.

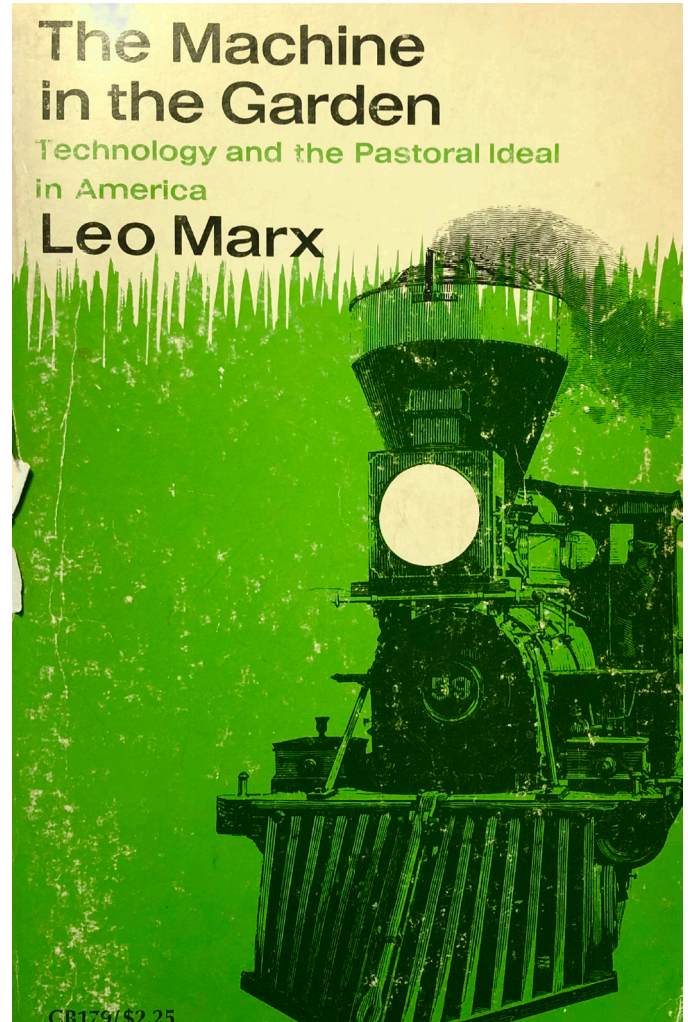
The graduating seniors each year selected one teacher as an honorary member of the class, and in 1968 that honor was bestowed on Leo Marx. His lecture examined the disruptive effects of technology on contemporary American society, including what President Eisenhower had termed "the military industrial complex," the war in Vietnam, and the tendency to assume that new machines could solve social and economic problems. He made considerable reference to Lewis

23 John Motyka, "Leo Marx, 102, Dies; Studied Clash of Nature and Culture in America," *The New York Times*, March 15, 2022.

Mumford's works, and to a wide range of works in sociology and philosophy, notably Martin Heidegger's understanding that the essence of technology lies in the mind not in the machine.

Influence

I took *The Machine in the Garden* to graduate school at the University of Minnesota, where Marx had once taught and still was highly regarded at its Center for American Studies. Only in graduate school did I fully understand how interdisciplinary his book was. At Amherst, the combination of history, literature, fine art, psychology, and the social sciences had seemed natural, but the Minnesota faculty did not all share such a commitment to interdisciplinarity. The New Criticism was still strong in the English Department, and I had to defend the "myth and symbol" approach and to find arguments for the very idea of American Studies itself. To my surprise, I discovered many useful arguments in paragraphs of *The Machine in the Garden* that had not seemed important before. I began to understand the book's role in shaping American Studies. It offered a model for how to combine sweeping analysis with close readings. It was genuinely interdisciplinary. While it focused on literature, the methods could be appropriated for more historically focused work. The book also provided a blueprint for how to teach American literature, and many survey courses were based on it, both in the United States and abroad.



Paperback book cover, *The Machine in the Garden*.

By the time I completed graduate school in the middle 1970s, however, academic fashions were changing. The field of American Studies began to emphasize social history more than literature. Sacvan Bercovitch argued that myths and symbols would best be understood in terms of ideology.²⁴ Fredric Jameson interested many young scholars in revisionist forms of Marxism, and Hayden

24 Sacvan Bercovitch, *The American Jeremiad*. (Madison: University of Wisconsin Press, 1978).

White's *Metahistory* challenged the use of realism as the template for writing history.²⁵ Using such new methods, the next generation of scholars focused on racial injustice, class tensions, and gender.

These matters were not excluded from the American Studies I had known at Amherst, and they were in harmony with the tradition of social engagement that Marx represented. But each academic movement establishes itself by attacking those who went before. The so-called "myth and symbol school," which in fact never formally existed or called itself by that name, came under attack.²⁶ *The Machine in the Garden* was criticized because it dealt with male writers, because it had little to say about race, and because it primarily dealt with "great" or canonical works. Criticism that focuses on what is not in a book is always a bit suspect, for no book can cover everything. The relevant question is "Are the arguments and methods in a work viable when looking at other authors, or when studying class, race, gender, and popular culture?" They are. Marx's lectures and classes incorporated female and Black authors into his analysis of American literature, including the works of Willa Cather, Sarah Orne Jewett, Jean Toomer, Ralph Ellison,

and Richard Wright.²⁷ Both pastoralism and the idea of a "middle landscape" are present in the first chapters of Cather's *My Antonia* or Wright's *Black Boy* each of which contains some of the most lyrical pastoral passages in American literature. Furthermore, Marx's work is still useful when analyzing political speeches, popular novels, and historical documents.²⁸ In the Marx papers at MIT one finds items such as "The Unfinished Agenda of Martin Luther King, 1994" (Box 9) or "Ethical Issues in the Assessment of Science." (Box 8)²⁹

The Machine in the Garden has outlasted its critics and remained in print for six decades. It is so well known that other books refer to it in their titles. In 1994 appeared *The Garden in the Machine* (Princeton), in 2004 *The Machine in Neptune's Garden* (Watson Science), and in 2001 *The Garden in the Machine: A Field Guide to Independent Films about Place*. In 1991, the journalist Joel Garreau devoted a chapter of *Edge City* to "The Machine, the Garden, and Paradise."³⁰ One American Studies classmate from Amherst, Gordon Radley, became the president of Lucas Films. He told me in 1998 that *The Machine in the Garden* had influenced

25 Fredric Jameson, *Marxism and Form*. (Princeton: Princeton University Press, 1974); Hayden White, *Metahistory* (Baltimore: Johns Hopkins University Press, 1973.)

26 Günter H. Lenz *A Critical History of the New American Studies, 1970-1990* (Hanover, New Hampshire: Dartmouth College Press, 2017.)

27 Marx's papers at MIT include folders on pastoralism in Jean Toomer and Willa Cather (Box 4), and on Cather (Box 7). See https://archivesspace.mit.edu/repositories/2/top_containers/34306

28 See Nye, *America as Second Creation*: on home-steading, 43-89; on mills and industries, 91-145; on canals and railroads, 147-204; on irrigation, 205-259.

29 <https://archivesspace.mit.edu/repositories/2/resources/1161>

30 Joel Garreau, *Edge City* (New York: Anchor Books, 1992), 362-372.

the Star Wars series of films. A comprehensive study would bring many such influences to light.

No reconsideration of Marx's influence should overlook his generosity to scholars and students. His doctoral students recall that he set high standards. A professor at MIT declared that "One could not ask for a kinder, gentler person to slice a young scholar's early writings to the bone." He recalled that Marx wrote extensive comments on his papers, and that, "He made me a better writer, a better thinker, and a better historian, and left similar marks on many others."³¹ For half a century he read countless manuscripts and book proposals and had coffee with distraught PhD students and young faculty, coaxing out their ideas for discussion. As late as 2002 he convinced me that I needed an additional chapter in a book that I thought was complete. His method was gently Socratic, deftly asking questions and listening, seldom speaking at length. Many have acknowledged his help, including six authors who published after Marx was 84

years old.³² Their books cover quite a range of topics, from English literature to global ethics, from cell technology to Paul Revere, from anthropology to literary Concord. Marx clearly knew about many things that he never put into his publications, and he was quick to comprehend the structural problems or gaps in a manuscript.

Marx's scholarship still speaks to present-day American studies, as attested to by a collection of essays published in Germany in 2014 on the fiftieth anniversary of *The Machine in the Garden*. These essays discuss antebellum factory literature, post-Civil War gardening, rural electrification, Robert Smithson's Spiral Jetty, the film *Jurassic Park*, Hollywood romantic comedies, and Native American novels. Many more topics could be added to this list. Alan Trachtenberg emphasized in his epilogue to that volume that in *The Machine in the Garden* "the machine remains dominant over the social order and its nostalgic echoes and hints of Jeffersonian democracy. The book tells one story after another of failure, failure of hope, of vision, of imagination of

31 David Mindell, from <https://news.mit.edu/2022/professor-emeritus-leo-marx-american-history-scholar-dies-0414>

32 Giles Gunn, *Ideas to Live For: Toward a Global Ethics* (Charlottesville: University of Virginia Press, 2015); Hannah Landecker, *Culturing Life: How Cells Became Technologies*. (Cambridge: Harvard University Press, 2010); Joseph Andrews, *Literary Concord Uncovered: Revealing Emerson, Thoreau, Alcott, Hawthorne, and Fuller*. (Bloomington: Xlibris, 2014); Michael M. J. Fischer, *Emergent Forms of Life and the Anthropological Voice*. (Duke University Press, 2003); Robert Martello, *Midnight Ride, Industrial Dawn: Paul Revere and the Development of American Enterprise*. (Baltimore: Johns Hopkins University Press, 2010); Ruth Perry, *Novel Relations: The Transformation of Kinship in English Literature*. (Cambridge: Cambridge University Press, 2004).

viable alternatives to the capitalist-industrial order in which the machine reigns.”³³ Already in 1964 Marx was calling for new narratives, new tropes, and new symbols adequate to encompass the post-industrial order. His book ends with the words, “we require new symbols of possibility, and although the creation of those symbols is in some measure the responsibility of artists, it is in greater measure the responsibility of society. The machine’s sudden entrance into the garden presents a problem that ultimately belongs not to art but to politics.”³⁴

Later Career

The need for new symbols of possibility and viable alternatives is even more urgent in the Anthropocene, where the machine has not only entered every garden but also the seas and the skies, penetrated the body, and linked the mind to digital media. As the last page of *The Machine in the Garden* intimated, after 1964 Marx would shift his focus gradually away from literature toward politics and history, especially after he moved to the program on Science, Technology, and Society at MIT in 1977. Unfortunately, his later writings have often been ignored by American Studies scholars, who lump his work together with other founders of the field and dismiss it as part of an “old” American Studies that focused

on national character, exceptionalism, and white men. This view of his work may seem to be reinforced by an article Marx wrote on the “Ur Theory of American Studies.”³⁵ In it, he discussed the shift in attitudes from graduate students who “believed in America” during the 1950s to the more alienated, ambivalence views among young scholars after 1968. The Vietnam War, the assassinations of Martin Luther King and Robert Kennedy, the rise of feminism, the resistance of Native Americans to assimilation, and the increasing conservatism of national politics, taken together, led many Americanists to oppose the government and what was generally termed “the establishment.” But recall that when Marx arrived at Harvard, one of the first things he did was to join a street demonstration against General Franco. He was a captain in the Navy during World War II, but he did not blindly “believe in America.” He was outspoken in support of Civil Rights and in opposition to the Vietnam war. He was understood to be on the Left when elected president of the American Studies Association in 1976. Nevertheless, by that time the field was being strongly influenced by feminism, structuralism, deconstruction, and social science theories. By the 1990s, “New Americanists” described Marx’s work in the past tense.

Yet Marx remained one of the most prominent humanists in the country. In 1972 he was elected to lifetime membership in the

33 Alan Trachtenberg, “Epilogue: Politics and Culture,” in Eric Erbacher, Nicole Maruo-Schröder, Florian Sedlmeier, *Rereading the Machine in the Garden: Nature and Technology in American Culture*. (Frankfurt: Campus Verlag, 2014), 233.

34 Marx, *The Machine in the Garden*, 365.

35 Leo Marx, “On Recovering the ‘Ur’ Theory of American Studies,” *American Literary History* 17: 1 (Spring, 2005), 118-134.



Leo Marx, January, 2011, standing at the front door of his house, aged 92.

American Academy of Arts and Sciences, and for some years he also chaired the American Literature Section of the Modern Language Association. His work remained influential abroad, and his writings reached scholars in many fields. When 69, he published *The Pilot and the Passenger*, a collection of nineteen essays written between 1950 and 1988.³⁶ These could all be classified as works in American literature or American studies. Moreover, that volume did not include essays that addressed other audiences. *The Massachusetts Review* published "On Heidegger's Conception of 'Technology' and Its Historical Validity," that lies within the fields of philosophy and the history of technology. Marx also ventured

36 Marx, *The Pilot and the Passenger*.

into the relationship between science and economics in an essay for *Technology in Society*, "Developing a national science culture under free trade: What kind of knowledge do we need?" The trajectory of his later career also emerged in an article for the *Journal of the History of Biology* on "Environmental degradation and the ambiguous social role of science and technology."³⁷ He was becoming a spokesperson for the emerging field of the environmental humanities.

In recognition of his life's work, in 2002 Marx received the Leonardo da Vinci Medal, the highest award given by the Society for the History of Technology, and in 2014 the Centennial Medal from Harvard University. The da Vinci Medal citation praises him as a scholar who "early cautioned against the Western tendency to equate progress with technology and who questioned critically whether technology really meant progress."³⁸ He attacked deterministic thinking about "the machine." As he explained in 2010 in "Technology: The Emergence of a Hazardous Concept:"

37 Leo Marx, "On Heidegger's Conception of 'Technology' and Its Historical Validity," *The Massachusetts Review* 25: 4 (Winter 1984), 638-652; Leo Marx, "Developing a national science culture under free trade: What kind of knowledge do we need?" *Technology in Society* 11: 2, 1989, 203-211; Leo Marx, "Environmental degradation and the ambiguous social role of science and technology," *Journal of the History of Biology*, 25, (1992), 449-468.

38 "The Leonardo da Vinci Medal," *Technology and Culture*, 44:1 (2003), 125.

Technology, as such, makes nothing happen. By now, however, the concept has been endowed with a thing-like autonomy and a seemingly magical power of historical agency. We have made it an all-purpose agent of change. As compared with other means of reaching our social goals, the technological has come to seem the most feasible, practical, and economically viable. It relieves the citizenry of onerous decision-making obligations and intensifies their gathering sense of political impotence. The popular belief in technology as a—if not the—primary force shaping the future is matched by our increasing reliance on instrumental standards of judgment, and a corresponding neglect of moral and political standards, in making judgments about the direction of society.³⁹

Few academic books remain in print for sixty years and sell several hundred thousand copies. *The Machine in the Garden* remains a compelling meditation on the disruptive role of technology in American society. It links the founding figures who taught Marx – Miller, Boorstin, Matthiessen, and Smith – with the generations of American Studies and STS scholars whom he taught and influenced. His later publications moved in new directions, as he became a critic of technological culture and a founding figure in the environmental humanities. In the Anthropocene, American Studies might build on that legacy.

As global warming, species extinction, and pollution become more urgent problems, they demand the ability to see the choices accurately and to make informed decisions. However, the widespread belief in deterministic technology often paralyzes individual agency to overcome environmental crises. American Studies would do well to retain its early focus on landscape, and add to it the study of endangered species, energy transitions, information systems, the illusion of “technological fixes” for social problems, and the ethics of scientific research.

39 Leo Marx, “Technology: The Emergence of a Hazardous Concept,” *Technology and Culture*, 51:3 (July 2010), 577.

Works Cited

- "The Leonardo da Vinci Medal," *Technology and Culture*, 44:1 (2003), 125.
Andrews, Joseph. *Literary Concord Uncovered: Revealing Emerson, Thoreau, Alcott, Hawthorne, and Fuller*. (Bloomington: Xlibris, 2014).
- Bercovitch, Sacvan. *The American Jeremiad*. (Madison: University of Wisconsin Press, 1978).
- Conway, Jill Ker, Kenneth Keniston, and Leo Marx, *Earth, Air, Fire, Water: Humanistic Studies of the Environment*. (Boston: University of Massachusetts Press, 2000).
- Danly, Susan, and Leo Marx, eds. *The Railroad in American Art*. (Cambridge: MIT Press, 1988).
- Erdrich, Louise. *Tracks*. (New York: Harper and Row, 1988).
- Fischer, Michael M. J. *Emergent Forms of Life and the Anthropological Voice*. (Duke University Press, 2003).
- Garreau, Joel. *Edge City*. (New York: Anchor Books, 1992).
- Gleason, Philip. "World War II and the Development of American Studies," *American Quarterly* 36, no. 3 (1984).
- Gunn, Giles. *Ideas to Live For: Toward a Global Ethics*. (Charlottesville: University of Virginia Press, 2015).
- Jameson, Fredric. *Marxism and Form*. (Princeton: Princeton University Press, 1974).
- Landecker, Hannah. *Culturing Life: How Cells Became Technologies*. (Cambridge: Harvard University Press, 2010).
- Lenz, Günter H. *A Critical History of the New American Studies, 1970–1990*. (Hanover, New Hampshire: Dartmouth College Press, 2017).
- Martello, Robert. *Midnight Ride, Industrial Dawn: Paul Revere and the Development of American Enterprise*. (Baltimore: Johns Hopkins University Press, 2010),
- Marx, Leo. "The Pandering Landscape: On the Illusory Separateness of American Nature." *Nature's Nation, Revisited: American Concepts of Nature from Wonder to Ecological Crisis*. (Amsterdam: VU University Press, 2003), 30-42.

Marx, Leo. "'Noble Shit:' The Uncivil Response of American Writers to Civil Religion in America." *The Massachusetts Review* 14: 4 (Autumn, 1973), 709-739.

Marx, Leo. "Developing a national science culture under free trade: What kind of knowledge do we need?" *Technology in Society* 11: 2, 1989, 203-211.

Marx, Leo. "Double Consciousness and the Cultural Politics of F. O. Matthiessen," *Monthly Review*, Vol. 34, No. 9: February 1983.

Marx, Leo. "Environmental degradation and the ambiguous social role of science and technology," *Journal of the History of Biology*, 25, (1992), 449-468.

Marx, Leo. "On Heidegger's Conception of 'Technology' and Its Historical Validity," *The Massachusetts Review* 25: 4 (Winter 1984), 638-652.

Marx, Leo. "On Recovering the 'Ur' Theory of American Studies," *American Literary History* 17: 1 (Spring, 2005), 118-134.

Marx, Leo. "Technology: The Emergence of a Hazardous Concept," *Technology and Culture*, 51:3 (July 2010), 561-577.

Marx, Leo. "The American Ideology of Space," *Denatured Visions. Landscape and culture in the twentieth century*. (New York: Museum of Modern Art, 1991), 62-78.

Marx, Leo. "The American Revolution and the American Landscape," delivered as a lecture at the University of Virginia in 1974. Available at <https://www.aei.org/wp-content/uploads/2016/03/BicentenUSA11.pdf?x91208>

Marx, Leo. "The Idea of Nature in America," *Dædalus* 137:2 (2008), 8-21.

Marx, Leo. *The Machine in the Garden*. (New York: Oxford University Press, 1964).

Marx, Leo. *The Pilot and the Passenger: Essays on Literature, Technology, and Culture in the United States*. (New York: Oxford University Press, 1988).

Matthiessen, F. O. *American Renaissance*. (New York: Oxford University Press, 1941)

Miller, Perry. *Errand into the Wilderness*. (Cambridge: Harvard University Press, 1956).

Miller, Perry. *The Life of the Mind in America*. (San Diego: Harcourt Brace Jovanovich, 1965).

Motyka, John. "Leo Marx, 102, Dies; Studied Clash of Nature and Culture in

America," *The New York Times*, March 15, 2022.

Nye, David E. "The Rapprochement of Technology Studies and American Studies." ed. John Carlos Rowe, *A Concise Companion to American Studies*. Vol. 1. (Oxford: Wiley-Blackwell, 2010), 320-333.

Nye, David E. *American Technological Sublime*. (Cambridge: The MIT Press, 1994).

Nye, David E. *Conflicted American Landscapes*. (Cambridge: MIT Press, 2021).

Nye, David E. *Seven Sublimes*. (Cambridge: The MIT Press, 2022).

Nye, David E. *America as Second Creation*. (Cambridge: The MIT Press, 2003).

Perry, Ruth. *Novel Relations: The Transformation of Kinship in English Literature*. (Cambridge: Cambridge University Press, 2004).

Smith, Henry Nash. *Virgin Land*. (Cambridge: Harvard University Press, 1950).

Trachtenberg, Alan. "Epilogue: Politics and Culture," in Eric Erbacher, Nicole Maruo-Schröder, Florian Sedlmeier, *Rereading the Machine in the Garden: Nature and Technology in American Culture*. (Frankfurt: Campus Verlag, 2014).

White, Hayden. *Metahistory*. (Baltimore: Johns Hopkins University Press, 1973.)