

Ecology

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IN the postrevolutionary utopian society of William Morris's 1890 novel *News from Nowhere*, the English language has evolved to reflect the transformations of postcapitalist life, and "nature," in the sense of the natural world, is a term understood to express an outdated capitalist ideology. One character named Clara reflects back on the nineteenth century "mistake" of "always looking upon everything, except mankind, animate and inanimate — 'nature,' as people used to call it—as one thing, and mankind as another." Such thinking, she says, led people to "try to make 'nature' their slave, since they thought 'nature' was something outside them."¹ Another character, Dick, explains, "I can't look upon [the natural world] as if I were sitting in a theatre seeing the play going on before me . . . I am part of it all."² Morris's lines advance an early socialist critique of capitalist appropriation of the natural world, but they also follow from decades of Victorian reimagining of "nature" and the human place within it. Such reimagining can be summed up in one word, a word with Victorian origins: ecology.

"Ecology" was coined in 1866 by Ernst Haeckel in his *Generelle Morphologie der Organismen*: "By ecology, we mean the whole science of the relations of the organism to the environment including, in the broad sense, all the 'conditions of existence'."³ The concept had become thinkable to Haeckel after reading Charles Darwin's *The Origin of Species* (1859) in its German translation; thereafter, Haeckel became an enthusiastic advocate of evolutionary theory, and with the term "ecology" he sought to articulate a Darwinian sense of the natural world as dynamic, interrelational, and fully inclusive of the human. This contrasted with an earlier vision of a fixed and unchanging "nature" governed by a "creative and regulative power," as the *Oxford English Dictionary* puts it.⁴ "Ecology" recast the natural world in scientific rather than religious terms as evolving, relational, and holistic.

The idea of nature as static backdrop or handmaiden to human ambition proved persistent, however, and arguably was even cemented by the nineteenth-century industrial revolution and its accelerating operations of extraction and despoliation. Just as new ecological theories of the natural world were coming to recognize the interdependence of its many parts, capitalist technologies were perfecting capacities for the removal or derangement of these parts.⁵ Since then, acceleration has only accelerated, and

ecological thinking has still not fully permeated our language or our methods of critically analyzing language. While the science of ecology was declared to have reached its “maturity” all the way back in 1955,⁶ and has continued to develop since, as recently as 2007 Tim Morton was still making the literary-critical case against “nature” as “a transcendental term in a material mask,” the semantic conveyor of an ideology responsible for inhibiting the rise of a “genuinely ecological politics, ethics, philosophy, and art.”⁷ Meanwhile, even as we have failed to take on board a fully ecological understanding of the natural world, metaphorical ecology has pervaded other domains of analysis as with the concept of “media ecology.”⁸

Where does “ecology” sit within literary criticism today? Ecocritics have moved away from the “nature writing” formulation that dominated earlier work, and “ecology” has now supplanted “nature,” ushering in a more systematic understanding of the natural world. A critical perspective closely attentive to evolutionary science, climate science, and earth systems science is apparent, for example, in recent work in Victorian studies by Allen MacDuffie, Heidi Scott, and Jesse Oak Taylor.⁹ But for many recent critics, even the term “ecology” is now proving inadequate, for while it usefully suggests dynamic interrelation, it can also convey balance, equilibrium, and health—a result, in part, of having been taken up as a catchphrase in the twentieth-century environmental movement.¹⁰ “Ecology,” for this reason, may not be up to the task of representing environmental crisis in the age of irreversible human impacts known as the Anthropocene.¹¹ A proliferation of new terms have thus emerged in recent ecological critique: “natureculture” from Donna Haraway, “oikeios” from Jason Moore, “dark ecology” from Tim Morton, and “abnatural ecology” from Jesse Oak Taylor, all of which are meant to express, in different ways, ecological relations with an eye to anthropogenic influence. Other critics are responding to the same state of affairs by expanding the reach of ecological thought: Devin Griffiths, for example, is developing a theory of ecological form to challenge the organic model that pervades aesthetic theory. Influenced by “recent findings in physiology, developmental biology, and epigenetics,” Griffiths argues that “we need a more ecological notion of form—one that accounts for form’s basic relationality—to figure out not only how something like a novel works, but what novels can tell us about our current predicament, and the crisis of collective agency that characterizes the Anthropocene.”¹² Griffiths traces his ecological notion of form back to Darwin, but also brings it to bear on the failures of collectivity animating our contemporary political scene.

“Ecology” is, in this sense, both a scientific term that emerged in the Victorian era to describe observable features of biological relations, and an ethic or principle of coexistence that developed over time through literary and philosophical reflections on “ecology” as a vision of shared life.

NOTES

1. William Morris, *News from Nowhere* (Peterborough: Broadview, 2003), 219 (my emphasis).
2. Morris, *News*, 245.
3. For translation see Robert C. Stauffer, “Haeckel, Darwin, and Ecology,” *Quarterly Review of Biology* 32, no. 2 (June 1957): 138–44, 140. For a more recent account of Haeckel’s relation to Darwin, see Robert J. Richards, *The Tragic Sense of Life: Ernst Haeckel and the Struggle over Evolutionary Thought* (Chicago: University of Chicago Press, 2008).
4. “nature, n.,” OED Online, Oxford University Press, <http://www.oed.com> (accessed December 1, 2017).
5. Haeckel’s work was taken up by nineteenth-century socialism, but mainly for its secularism. Raymond Williams, “Socialism and Ecology,” *Capitalism, Nature, Socialism* 1 (1995): 41–57, 41.
6. See Lee R. Dice, “What Is Ecology?” *The Scientific Monthly* 80, no. 6 (June 1955): 346–55, 346.
7. Tim Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*. (Cambridge: Harvard University Press, 2007), 14.
8. Ursula Heise describes how ecological thinking has been generative for media theorists as “a mode of reasoning that foregrounds the whole in its internal interconnectedness,” and yet she worries that the “transfer of vocabulary . . . at least implicitly invites a perception of media ecology as a replacement for biological ecology,” unless the two spheres can be thought about together. Ursula Heise, “Unnatural Ecologies: The Metaphor of the Environment in Media Theory,” *Configurations* 10, no. 1 (Winter 2002): 149–68, 156, 164.
9. See Allen MacDuffie, *Victorian Literature, Energy, and the Ecological Imagination* (Cambridge: Cambridge University Press, 2014); Jesse Oak Taylor, *The Sky of Our Manufacture: The London Fog in British Fiction from Dickens to Woolf* (Charlottesville: University of Virginia Press, 2016); Heidi C. M. Scott, *Chaos and Cosmos: Literary Roots of Modern Ecology in the British Nineteenth Century* (University Park: Pennsylvania State University Press, 2014).

10. Heidi Scott sums up the problem with such a vision of natural balance: “ecological science has critiqued the balance paradigm as a misleading, quasi-mystical construct that forces economic and mechanical models on the obscure dynamics of ecological interconnection” (Scott, *Chaos and Cosmos*, 2).
11. As is now widely known, earth systems scientists have introduced the term “Anthropocene” to describe a new geological epoch marked by irreversible human impacts. Some critics prefer “Capitalocene” to convey that it was capitalism, not humanity per se, that brought the Holocene to an end; others have proposed “Plantationocene” for its attention to agricultural, forests, and human labor. On Anthropocene, see Tobias Menely and Jesse Oak Taylor, “Introduction,” in *Anthropocene Reading: Literary History in Geologic Times*, ed. Tobias Menely and Jesse Oak Taylor (University Park: Pennsylvania State University Press, 2017), 1–24. On Capitalocene, see Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (London: Verso, 2016); Jason W. Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (London: Verso, 2015). On Plantationocene, see Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 206.
12. Devin Griffiths, “The Ecology of Form,” lecture at Wheeler Hall, University of California, Berkeley, November 13, 2017.



Education

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AT the beginning of the nineteenth century, education in England was provided by a motley assortment of institutions, some under the aegis of the Church, none under the direct control of the state, each aimed at a particular segment of the population—the working poor (Ragged and Sunday Schools); middle- and upper-middle-class boys (grammar and public schools) and, less consistently, girls (proprietary schools); a tiny male elite (universities). By the end of the century, elementary education was compulsory and state-supported; women