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Mischaracterizing the Environment: Hardy, Darwin, and the Art of Ecological Storytelling

JOHN MACNEILL MILLER

ON SEPTEMBER 14, 1895, GEORGE Gissing took a train to Dorset to spend a weekend at Max Gate, the home of Thomas Hardy and his wife, Emma. The visit disappointed Gissing, who was shocked to discover that Hardy's evocative West Country landscapes were not founded on firm knowledge of local flora and fauna. "I find that he does not know the flowers of the field!" the crestfallen Gissing wrote (*Collected Letters* 28). He was not alone in his disillusionment. As Hardy's biographer Michael Millgate notes, Hardy "seems in general to have spent a good deal less time outdoors than either his birth, his vocation, or his choice of domicile might have suggested. People meeting him for the first time often remarked upon the paleness of his complexion and his failure to look like a countryman" (244).

These anecdotes have had little effect on Hardy's reputation for intimacy with nature. His extended descriptions of heaths, chalklands, forests, and fields

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ABSTRACT: This article reads Hardy's representation of Egdon Heath in *The Return of the Native* (1878) against the ecology and environmental history of English heathland to challenge a growing consensus that sees Hardy as an ecological thinker. Hardy's writings fall short of ecological understanding, I argue, because his vision of humans entangled with an animated but deeply inhuman landscape creates affective and scalar tensions that falsely cast interspecies interdependence as ominous and alienating.

have all but cemented his place in the English canon as a “landscape novelist,” a writer whose depictions of characters immersed in their local environments offer “convincing proof of [his] appreciation of, and sympathy with, Nature” (Irwin 4; Lea 67). Hardy’s reputation as an attentive observer of the more-than-human world has only increased in recent years, buoyed by our rising awareness of humanity’s devastating effects on the environment. Indeed, a consensus seems to be emerging among posthumanists and ecocritics that Hardy was a prescient ecological thinker, one whose insights are just now beginning to be appreciated. By situating his characters within a sprawling nonhuman landscape, such critics argue, Hardy shows human beings to be relatively insignificant players in a much larger natural drama. Hardy’s work thereby acts as a corrective to the anthropocentric culture that has enabled our age of environmental catastrophe.¹

As Gissing discovered in 1895, however, there is a vast gap between evocative writing about landscape and a clear understanding of the many interdependent lives, human and nonhuman, that inhabit such scenes. While it is undeniable that Hardy’s novels attempt to integrate human characters with natural environments, they employ rather peculiar modes of doing so. His narratives typically portray the nonhuman environment in terms of a single monolithic nature—a monstrous, unfeeling aggregate that overwhelms and ultimately extinguishes the human spirit. These grotesque, lopsided visions of nature’s relation to humanity are unforgettable, but they do little to promote accurate understanding of ecological interactions. Indeed, they obscure one of the central tenets of modern ecology: the recognition that humanity has extraordinary power to shape (and too often, to destroy) the fragile interspecies communities called ecosystems. This obfuscation proves especially troubling at a time when many thinkers argue that we have so radically transformed the very composition of Earth that we have effectively entered a new geological epoch, the Anthropocene, which is marked by humanity’s indelible impacts on the natural world.²

If Hardy was such a keen observer of nature and its relation to human life, why couldn’t he see human beings as anything but defenseless victims in nature’s uncaring hands? After all, contemporaries such as John Ruskin, George Perkins Marsh, and Charles Darwin all remarked on the fragility of natural landscapes in the face of human activity—and they in turn were building on a long tradition of concern about natural resource depletion.³ It doesn’t make sense, then, to see Hardy’s ecological oversight as a product of his benighted historical moment. His oversight is a personal problem—and one that is inextricable from his idiosyncratic methods of imagining the natural world. The relation between Hardy’s aesthetics and his understanding of nature is

clearest in the midcareer novel that is often cited as a turning point in his depiction of the nonhuman: *The Return of the Native* (1878).⁴

The Return of the Native famously opens with a personification of Egdon Heath—a trope that establishes the novel's pattern of treating this setting as a larger-than-life character that exerts an outsize influence on human fates. The particular formal strategies Hardy employs to characterize the landscape cast the heath as appealingly anthropomorphic, but also essentially inhuman. The result is an uncanny and unforgettable vision of the natural world as by turns powerfully attractive and fiercely repellent. Fascinating as it is, this vision contains no implication of ecological interdependence: it continues to imagine the environment as distinct from, and all but impervious to, human agency.

The inability of this kind of environmental imaginary to capture the dynamics of ecological interdependence is dramatically illustrated in the fate of the English heathlands that Egdon Heath is supposed to represent. *The Return of the Native* casts Egdon as an ahistorical, inhuman, and indestructible natural presence. As Charles Darwin had realized nearly two decades prior to the publication of Hardy's novel, however, English heaths are neither indestructible nor inhuman: they are fragile landscapes whose flora and fauna depend on human agricultural practices for survival. In *The Origin of Species* (1859), Darwin provides a clarifying narrative of his discovery that English heaths are man-made places. Furthermore, Darwin's account demonstrates how literary constructs of character and setting can either enable or impede ecological understanding, depending on how they are used. It suggests, in fact, that Hardy's mischaracterization of heathland was quite literally that: a misattribution of character status to a landscape, one that made it all but impossible for Hardy to see the many agentic individuals working together to create this seemingly static scenery.

A century after *The Return of the Native* was published, the Dorset heathlands where it was set had virtually disappeared. They fell victim to a combination of antagonism and neglect rooted in popular misunderstandings of what heathland was—misunderstandings reflected and promulgated in Hardy's novel. When critics equate Hardy's uncanny, agentic environments with ecological understanding, then, they unwittingly reinforce such disastrous misrecognitions of nature and of humanity's entanglements with it. The tendency to conflate Hardy's alluring but ill-considered visions of the environment with ecological understanding drives home the need for more historically responsible, more formally nuanced ways of reading the relations between character and setting—relations that will prove key to reconfiguring how we imagine human capability and human responsibility in this new, earth-shattering epoch we have come to call the Anthropocene.

A Question of Character

Surveying his own prodigious output in preparation for the 1912 Wessex Edition of his works, Thomas Hardy retroactively classified many of his fictions as “Novels of Character and Environment.”⁵ In recent years, posthumanists and ecocritics have treated this designation as convenient shorthand that indicates Hardy’s ecological commitments—his significance as a writer whose novels are “imbued with the sense that the human body and the natural world are of a piece, each shaping the other to its purposes” (W. Cohen, “Arborealities”). This line of criticism tends to acclaim those Hardy novels that exhibit what Elisha Cohn calls an “aesthetic of becoming[, which] involves . . . blurred boundaries between the subjects and objects of perceptions rendering individual humans, animals, and inanimate things indistinct” (504–05).⁶ Ecocritical readings treat these blurred lines between character and environment as impressively prescient. Because Hardy “compares and associates” human beings with their natural surroundings, the thinking goes, he must “thereby [be] integrating the characters and their environment” in an “ecological” manner (E. Miller, “Dendrography” 708).

The act of associating human beings with natural landscapes does not automatically produce ecological understanding, however. Rather than lingering over the bare fact of such blurred lines, it is worth analyzing how, exactly, Hardy achieves his blurring and what its effects might be. A careful taxonomy of the formal devices Hardy uses to transcend divisions between character and environment shows that, for all their aesthetic appeal, they do not promote an ecological awareness of interdependence between human and nonhuman beings. Instead, they tend to result in a unilateral view of environmental relations, one where an amorphous and increasingly horrific nature figure dominates and subordinates the individual human will. That vision first emerges in *The Return of the Native*, the novel that—not coincidentally—offers the earliest and most sustained engagement with the rhetorical strategies of combining character and environment that would become characteristic of Hardy’s oeuvre. Revisiting the novel’s strangely agentic setting with an eye toward its formal features helps clarify how Hardy achieved his memorable melding of character and environment. It also suggests why that melding ultimately proved more ominous than ecological.

From the very first page, *The Return of the Native* departs from conventional landscape description by treating the scenery as an animated being—a trope that has led some critics to see Egdon Heath as a character in its own right.⁷ The book opens with a chapter whose title is a riddle: it promises to unveil “A Face on Which Time Makes But Little Impression” (9). The puzzling

phrase combines the individual and human idea of a face with the inhuman characteristic of imperviousness to time. The referent of the riddle is, of course, Egdon Heath, the primordial landscape whose metaphorical “face” remains unchanged across historical time, and this initial tension between humanity and inhumanity will come to be its defining feature.

At first Egdon’s personification can seem almost comforting: it suggests a harmonious relationship between humanity and the nonhuman. This impression is reinforced by the many resemblances the text establishes between human bodies and the terrain. Critics inclined to read such personification positively focus on moments that describe how the ancient road traversing the heath “bisect[s] that vast dark surface like the parting-line on a head of raven hair” (13), or how “a knot of stunted hollies” creates a black spot that “in the general darkness of the scene [stands] as the pupil in a black eye” (261).⁸ Taken together, these anthropomorphic passages appear to validate the narrator’s early assessment of Egdon as “perfectly accordant with man’s nature—neither ghastly, hateful, nor ugly: neither commonplace, unmeaning, nor tame; but, like man, slighted and enduring” (11).

Suggestive as they are, however, these resonances between humanity and landscape are merely metaphorical. They do complex affective work in the text—more on that later—but there is no reason to equate the nature appreciation they produce with ecological insights. In Aldo Leopold’s foundational formulation, ecological consciousness begins with an awareness of the ways “energy flows through a circuit called the biota” to produce “lines of dependency for food and other services” (232). These essentially metonymic connections between bodies have the power to reveal the web of interdependence underlying every ecosystem. By definition, however, the evocative power of Hardy’s metaphors derives not from their exploration of these kinds of spatiotemporal relations, but from the way they compare distinct, *unrelated* objects (heathland and a human face, scraggly furze and styled coiffure, holly trees and an open eye) to propose stunning aesthetic or conceptual congruities.⁹ In comparing or substituting these implicitly unconnected images with one another, Hardy’s metaphors do nothing to trace the extended material relations of bodies and landscapes. In fact, the text’s methods of connecting humanity and landscape actually obscure the dynamic relations between humans and heathlands that had been discovered earlier in the century. To see just how Hardy’s vision undercut the ecological understanding of heathland emerging in the Victorian era, it is necessary to examine his portrait of Egdon Heath in greater formal detail.

What makes this landscape portraiture so extraordinary is not only its novelty, but a certain bravura in the conferral of dynamism and interest on

what appears (by Hardy's own reckoning) to be a spectacularly flat, static, and monotonous setting. The text insists, after all, that the heath "had been from prehistoric times as unaltered as the stars overhead. . . . The sea changed, the fields changed, the rivers, the villages, and the people changed, yet Egdon remained" (Hardy, *Return* 11–12). In order to animate the apparent stasis of this landscape, Hardy focuses on the very features of Egdon that seem most alien and incommensurable with the scale of human life—its flatness, its largeness, its stillness, and its darkness—and reimagines them as expressions of an anthropomorphic interiority. According to the narrator, the very lack of activity visible on Egdon becomes a sign, for those savvy enough to read it, of a buried life of deep and inscrutable animation. Where others see inertness, the narrator argues, a true intimate of the heath sees patience and profundity—a place "full of a watchful intentness" (9). In this re-viewing, changeless Egdon is the result of a concerted effort to suppress an internal vivacity that plays out over stretches of time hard for humans to fathom:

This was not the repose of actual stagnation, but the apparent repose of incredible slowness. A condition of healthy life so nearly resembling the torpor of death is a noticeable thing of its sort; to exhibit the inertness of the desert, and at the same time to be exercising powers akin to those of the meadow, and even of the forest, awakened in those who thought of it the attentiveness usually engendered by understatement and reserve. (16)

Hardy's decision to render dynamic, enticing, and anthropomorphic what first manifests as the most boring traits of the landscape produces impressive results. Egdon emerges from *The Return of the Native* as a highly distinctive character whose physical attributes become active influences on individual human lives.

Yet a duplicitous artifice underlies this dynamism. It is not so much that Hardy has uncovered anything actually dynamic or engaging in the heath as that he has recast the monotonous stasis he sees as a kind of wise, willful resistance to change. So, viewed through Hardy's transformative metaphors, Egdon's uniformly dark coloration is not an unchanging feature of the landscape. It is, instead, a symbol of the land's dogged refusal to participate in daily cycles of lightening and darkening. "The face of the heath," Hardy writes, "by its mere complexion added half-an-hour to eve: it could in like manner retard the dawn, sadden noon, anticipate the frowning of storms scarcely generated, and intensify the opacity of a moonless midnight to a cause of shaking and dread" (9). The verbs here are astonishingly active and engaging for

a landscape—the land “add[s],” “retard[s],” “sadden[s],” “anticipate[s],” and “intensif[ies].” But all this dynamic writing is finally just a sort of rhetorical sleight of hand, a suggestive set of phrases describing the ways a dark and stable landscape appears under different atmospheric conditions. The end result does not uncover any appreciable liveliness in the environment itself, only in its creative characterization.

Moreover, any fascination these techniques add to the landscape comes at a cost. In order to recast the apparently unchanging features of the land as willful responses to human activity, *The Return of the Native* must interpret their inertia as intentional standoffishness—a recalcitrant affect that sometimes explodes into malevolent censure of all human activity. If Egdon Heath *appears* passive, Hardy rather paradoxically suggests, that is only because the landscape is actively opposing all hopeful and willful human action. It does not simply sit in the way of human agents—rather, it officiously works to “intensify . . . [the] shaking and dread” of anyone who encounters it (9). Instead of appearing to exist apart from human life, the landscape of Egdon Heath now appears to participate in it—but only as a conscientious objector.

As Hardy describes it, Egdon obstinately opposes itself to daily changes of light and dark, but its opposition does not stop there. It opposes historical changes as well as daily ones, as Hardy uncovers through his consultation of the eight-hundred-year-old territorial survey that is the Domesday Book. “This obscure, obsolete, superseded country figures in Domesday,” Hardy notes:

Its condition is recorded therein as that of heathy, furzy, briary wilderness,—“Bruaria.” Then follows the length and breadth in leagues; and, though some uncertainty exists as to the exact extent of this ancient lineal measure, it appears from the figures that the area of Egdon down to the present day has but little diminished. “Turbaria Bruaria”—the right of cutting heath-turf—occurs in charters relating to the district. “Overgrown with heth and mosse,” says Leland of the same dark sweep of country. (11)

Extending this art of remaking stasis into something dynamic and relational, Hardy reads the heath’s permanence as a pointed mockery of human culture: “Ever since the beginning of vegetation its soil had worn the same antique brown dress, the natural and invariable garment of the formation. In its venerable one coat lay a certain vein of satire on human vanity in clothes” (11). By the end of this introduction, Egdon exhibits a smoldering resentment toward society itself: “Here at least were intelligible facts regarding landscape. . . .

The untameable, Ishmaelitish thing that Egdon now was it always had been. Civilization was its enemy” (11).

Thus Hardy’s metaphors may discover among the rolling curves of scrub a familiar-feeling face, eye, shoulder, or even voice. In the aggregate, though, this anthropomorphic landscape turns out to be anything but friendly to the people who eke out their existences on it. Despite the Gaia-like symbiosis personification seems to promise, Egdon Heath rankles with anger toward humans and their history. Its apparent passivity is merely a sign that it “await[s] one last crisis—the final Overthrow” (10). If heath dwellers try to cultivate a relationship with such a landscape by, say, converting a portion of it to agriculture, Egdon wages a war of attrition against them—a war from which it always emerges victorious. The novel’s titular native, Clym Yeobright, observes the scars of these protracted battles upon his return from Paris, when he surveys the landscape and mentally remarks upon “the attempts at reclamation from the waste, [where] tillage, after holding on for a year or two, had receded again in despair, the ferns and furze-tufts stubbornly reasserting themselves” (172).

Who feels at home in such a place? Misanthropes, mostly. When characters like Clym embrace life on the heathland, they do so because they share its barely veiled hatred of humanity. Clym’s desire to return to the heath is driven by a sort of wistful recognition of the heath as deeply antisocial—and as therefore opposed to the fashionable world he, too, has come to despise. Although he is occasionally romanticized as inextricably “inwoven with the heath,” Clym’s upbringing did not immediately breed love for the landscape (166). By his own account, he concluded early on that “this place was not worth troubling about,” and that “life here was contemptible,” which led him to take a job as a jeweler in Budmouth and eventually in Paris (168). His return to Egdon represents a belated, ambivalent endorsement of this “obscure, removed spot” as the polar opposite of “the French capital—the centre and vortex of the fashionable world” (109). So, when he returns and sees ferns and furze reclaiming the lands of former farmers, Clym responds with sympathy for the heath and antagonism toward his fellow human beings. “[H]e could not help indulging in a barbarous satisfaction” at the heath’s victory and humanity’s loss, the narrator admits (172).

When his relationship with heathland is understood in this light, Clym’s apparently improbable love affair with Eustacia—who hates Egdon and wants nothing more than to escape to the cityscapes Clym has abandoned—makes a deeper sort of sense. Both agree on their understanding of what Egdon is, even if they initially differ on how to respond to it. Like Clym, Eustacia responds to

the heath as a sprawling, agentic enemy thwarting the civilization she craves. The polarized, magnetic attraction of Clym and Eustacia illustrates the counterintuitive complementarity that unites Clym's love with Eustacia's hatred. Their respective positions are as unstable as they are extreme. Eustacia's professed repugnance toward the heath masks her extraordinary similarity to it: over time, she has acquired the suppressed rancor, contrariness, and isolated majesty that—to the eyes of a newly converted antimodern like Clym—align her with the environment she despises. "Egdon was her Hades," Hardy remarks, "and since coming there she had imbibed much of what was dark in its tone, though inwardly and eternally unreconciled thereto" (67). Among other things, she drinks in the land's misanthropy, which distances her from other people. "I have not much love for my fellow creatures," she confesses to a bewitched, bewildered Clym: "Sometimes I quite hate them" (183).

Clym evinces the same unstable combination of identity with and repulsion toward the environment he inhabits. For all his supposed entanglement with Egdon, he experiences several affective reversals when he realizes that the land's enmity is indiscriminate: its aggressive indifference to the human race includes him within it. After Eustacia accepts his marriage proposal, for example, Clym is unsettled by the absence of feeling in the surrounding scenery: "As he watched, the dead flat of the scenery overpowered him. . . . There was something in its oppressive horizontality which . . . gave him a sense of bare equality with and no superiority to a single living thing under the sun" (203–04). Clym confronts the inhumanity of his natural surroundings one more time late in the novel, after his mother dies of exposure in the landscape. Stepping out of the shack where her body lies, he finds himself face-to-face with "the imperturbable countenance of the heath, which, having defied the cataclysmal onsets of centuries, reduced to insignificance by its seamed and antique features the wildest turmoil of a single man" (312). These brief, revelatory glimpses of the heath's horror tellingly draw on both its characterization and its inhumanity, lingering over the riveting repulsion spawned by the way it incorporates these contraries.

There is a name for this eerie affective territory—the psychosocial space where growing sympathy and identification with a nonhuman object suddenly give way to revulsion, alienation, and horror. Designers and roboticists call it "the uncanny valley," a sort of aesthetic and emotional Bermuda Triangle that should be avoided at all costs. As the Japanese engineer Masahiro Mori first explained in 1970, we human beings are drawn to our own features. We typically respond positively to anthropomorphic elements in nonhuman objects, delighted to recognize traces of ourselves where we least expect it. But

if objects become very human-like, they slide into a liminal space where they appear too human to be objects but too object-like to count as truly human. In this murky ontological territory, anthropomorphism in nonhuman things goes from delightful to disturbing, as the humanized objects confound our sense of what constitutes humanity in the first place. The discomfort they produce raises the suppressed possibility that, as Sianne Ngai puts it, “if things can be personified, persons can be made things” (92). This unsettling tension occurs whenever an extended attempt at personification is applied to an object that nevertheless continues to flout certain anthropocentric standards of personhood. In such cases, the inhuman plays a creepy sort of peek-a-boo, as the personification alternately masks, then throws into stark relief, the object’s violation of conventional understandings of humanity.¹⁰

With his experimental reconfigurations of character and environment in *The Return of the Native*, Hardy inadvertently stumbles into the uncanny valley, and he maps it with all the fervor of a pioneer. Like a corpse or a glassy-eyed talking doll, Egdon Heath produces this vehement and highly recognizable response in attentive observers—including observers within the text itself. The attraction of Egdon’s insistent anthropomorphism kindles some sympathetic recognition, but this sympathy unpredictably gives way to revulsion and horror whenever the narrator or characters recall that this sweep of nonhuman nature is inherently inhuman. These affective patterns are on vivid display in *The Return of the Native*, but they are not confined to any single Hardy text. Indeed, critics have long recognized the extreme, unstable alternation between attraction and repulsion toward life as a hallmark of Hardy’s work. In her groundbreaking study of Darwinian influences on Victorian literature, Gillian Beer dubbed this quirk of Hardy’s his “creative vacillation” between “[h]appiness and hap” (229). George Levine describes it more simply as “Hardy’s ambivalent relation to the natural world” (*Reading* 119–20). Whatever the preferred terms, the pattern is unmistakable.

Egdon Heath shows how that pattern emerges as the by-product of a certain conceptualization of the natural world, one that would haunt Hardy to the end of his career. Although none of his later novels personify the landscape to the same extent as *The Return of the Native*, they all indulge in some personification of nature—and they all demonstrate a concomitant misery about the outsize power of this inhuman figure over the individuals entangled with it. So, for example, *Tess of the D’Urbervilles* (1891) features an entire cast of characters confused and deceived by “the vulpine slyness of Dame Nature,” a figure who enforces a sexual agenda that leaves them “writh[ing] feverishly under the oppressiveness of an emotion thrust on them by cruel Nature’s

law—an emotion which they had neither expected nor desired” (191, 115). In *Jude the Obscure* (1894–95), this force of nature becomes almost cartoonishly human. Biological desires take the shape of arms that clutch Jude Fawley and drag him down a path toward Arabella, Sue, and personal destruction that he does not will for himself:

In short, as if materially, a compelling arm of extraordinary muscular power seized hold of him. . . . This seemed to care little for his reason and his will, nothing for his so-called elevated intentions, and moved him along, as a violent schoolmaster . . . towards the embrace of a woman. . . . (38–39)

Whatever the attraction of these uncanny characterizations of nature, they lead to a gross misreading of the relations between humanity and the natural world. They encourage deep ambivalence toward the environment, a volatile mixture of admiration for nature’s anthropomorphic aspects and repulsion at its inhumanity.¹¹ In the process, they distract from the circuits of material relations that inextricably connect humans and nonhumans together—the circuits Leopold identified as the cornerstone of ecological consciousness. An ecological approach to such interconnections reveals a nonhuman world that is both more hopeful and more imperiled than Hardy ever imagined.

Plots of Ground

Hardy’s writings on heathland have secured him a privileged place in the annals of English environmentalism. Conservationists celebrate him as a contrarian who broke with convention to recognize the value of heath landscapes that were, at the time, widely despised—and that have now been all but eradicated. In *The History of the Countryside* (1986), his magisterial survey of English environmental history, Oliver Rackham praises Hardy for offering an important counterpoint to “ericophobia”—Rackham’s word for the hatred of heathland that became commonplace in the late nineteenth and early twentieth centuries. Rackham groups Hardy with a small cadre of writers who captured “the glory and mystery and freedom of the heath” before adding, Cassandra-like: “But few listened” (303). The National Trust’s recent book-length tribute to English heathland follows Rackham’s lead, remarking that “it was Thomas Hardy who was to become heathland’s greatest literary champion” (Parry 32). The geographer Christopher Tilley has gone so far as to dub Hardy “[t]he principal ‘historian’ and ‘ethnographer’ of the English lowland heathland,” despite the fictional status of his representations of the landscape (370).

In a very fundamental sense, however, Hardy gets heathland wrong. The landscape he singles out as a “great inviolate place” possessing “an ancient permanence which the sea cannot claim” is in fact an entirely man-made, historically contingent community: an inherently unstable ecosystem dependent on human folkways of grazing, cutting, and burning to persist (Hardy, *Return* 12). Hardy was an adept chronicler of the particularities of life on the heath, and such grazing, cutting, and burning are described throughout *The Return of the Native*. Nevertheless, he never imagines a significant metonymic connection between the human activities he records and the environment in which they take place. Where Hardy failed to see ecological interconnection, one of his most important forebears had already succeeded. Twenty years prior to Hardy’s writing, Darwin concisely laid out a theory of the human origins of heathland in “The Struggle for Existence,” chapter 3 of *The Origin of Species*. There, Darwin turns to heaths as a textbook study of “the mutual relations of all organic beings”—the study that Ernst Haeckel later recognized as a new branch of science that he named *ecology* (Darwin, *Origin* 65).¹²

Returning to Darwin’s narration of his encounter with heathland helps explain why he saw the interspecies connections that eluded Hardy. It suggests that ecological storytelling is not simply a matter of creating narratives in which human and nonhuman beings appear to interact. Rather, ecological storytelling involves finding the best rhetorical forms to accurately capture the effects of such interactions—a process that involves viewing the world from multiple scalar perspectives to determine which agents and actions matter, and how those actions ripple across scales to shape the overarching ecosystem. The ability to elaborate such effects depends, in short, on judicious usage of that narrative attribution of agency known as characterization, which makes it possible to see how apparently local, individual actions may have effects that are distributed widely across space and time.¹³ Darwin’s hypotheses on heathland demonstrate how the scaling of character proves key to ecological understanding—and they also show how a fixation on landscape can impede such understanding, making cross-scalar thinking all but impossible.

At first, Darwin’s encounter with heathland in *The Origin* closely resembles Hardy’s later account of Egdon Heath. In Staffordshire, Darwin relates, he once found himself on “a large and extremely barren heath, which had never been touched by the hand of man” (59). As he looks around, he is surprised to discover that the landowners have successfully converted some of this apparently timeless, treeless landscape into a more economically productive type of terrain: “[S]everal hundred acres of exactly the same nature had been enclosed twenty-five years previously and planted with Scotch fir. The

change in the native vegetation . . . was most remarkable” (59–60). There was, he reports, a radical shift in “vegetation,” “insects,” and “insectivorous birds” over the course of that quarter century, which suggests the surprising mutability of a landscape that seemed unalterable (60).

A second, subsequent experience with heathland makes Darwin realize just how little effort it takes to destabilize such places. In Surrey, Darwin notes that yet another landowner appears to be fencing off heathlands to turn them into fir plantations. Looking closer, however, it dawns on him that the firs are not planted in any orderly fashion; they are “springing up in multitudes, so close together that all cannot live” (60). He realizes these are “self-sown firs,” not products of direct human intervention (60). Recognizing that he has misunderstood this place and the changes overtaking it, he begins searching for new perspectives that will clarify why every fenced-off swath sports a dense stand of evergreen trees. “When I ascertained that these young trees had not been sown or planted,” he recounts, “I was so much surprised at their numbers that I went to several points of view, whence I could examine hundreds of acres of the unenclosed heath” (60). His attempts to see the scene anew prove useless, however: each vista only discloses the same monotonous stretch of furze and heather that Hardy would render so memorably. On that unenclosed landscape, Darwin recalls, “literally I could not see a single Scotch fir” (60).

After failing to make sense of the heath from assorted scenic viewpoints, Darwin does something remarkable: he literally pulls the landscape apart. Shifting his gaze from the horizon to the plants and animals under his nose, Darwin bends over and separates the monotonous stalks of heather to peer beneath them. There he uncovers an entire community of pine trees that do not reach his knees—a crowd of heathland inhabitants he never saw before. Each of these miniscule seedlings, Darwin realizes, stars in its own individual story of thwarted survival. “In one square yard . . . I counted thirty-two little trees,” he writes, “and one of them, with twenty-six rings of growth, had during many years tried to raise its head above the stems of the heath, and had failed” (60).

Here, as in Hardy, literary language matters. When Hardy personifies the entire heath, he leaves the landscape ontologically intact. His personification tacitly admits the stability and internal coherence of the landscape as a conceptual category. The result is a totalizing understanding of the land and its nonhuman inhabitants as an “environment”—a monolithic, inhuman mass whose intents and actions operate at a scale that diminishes the human individual to insignificance. Darwin adopts a similarly scenic perspective on his first investigation into heathland. He quickly abandons it, however, when it proves inadequate to explaining the actual biotic phenomena he is seeing.

This move is, indeed, characteristic of Darwin's writings on landscape, which tend to begin from the artistic perspective of a single Romantic observer before breaking the scenery into individual organic and inorganic components. "From the visual unity of the observer's momentary perception," James Paradis observes, "we move to the conceptual diversity of [Darwin's] accumulating record of fact" (86). But if Darwin finally arrives at scientific clarity, that arrival does not take the shape of a direct jump from gauzy Romantic landscape to hard-nosed scientific objectivity. His scientific understanding comes by way of yet another aesthetic middleman: narrative. Darwin dissects the scenery to discover a world of anthropomorphic characters and entangled storylines secreted beneath it.

The divergent understandings of Darwin and Hardy, in other words, are not instances of the difference between fact and fiction or science and literature, but of the different insights afforded by different aesthetic methods.¹⁴ Darwin's physical decision to pull the scenery to pieces is also a philosophical decision to reject the sweeping scale and comparative permanence of the heathland—traits central to the very idea of landscape. When he discovers the tiny pines as a result, he frames their discovery not as a static fact, but as a useful clue that will help him unravel the story behind the superficial stasis of the landscape. If this move corroborates the argument of Jane Bennett and others that anthropomorphic approaches to the nonhuman can offer powerful tools to facilitate ecological understanding and interspecies sympathy, it also clarifies how the beneficial or baleful effects of such personification depend on the ways it is applied.¹⁵ In Darwin's writing, personification operates at precisely those individualized scales that Hardy's Egdon renders insignificant: not only does Darwin immediately anthropomorphize his tiny pines, but he singles out the representative struggle of "one of them . . . [that] had during many years tried to raise its head . . . and failed" (60).

Like all stories, this plot raises a question of causality: Why had the tree failed? The tree sprouted and began to grow, and then—*What happened next?* Rather than raising his eyes to the horizon (as Hardy might) and assigning this tree's failure to the unforgiving nature of the monolithic landscape, Darwin keeps his attention trained on individual agencies. The question of causation leads him to take stock of other characters who might figure in this narrative, and to reevaluate the significance of creatures he previously missed. Cattle, he realizes, must have "perpetually browsed down" the new growth of each seedling before any tree could get high enough to overshadow the heath (60). Although Darwin must have observed the occasional grazing animal in his wanderings, cattle did not factor into his sweeping survey of heathland scenery;

they did not seem like noteworthy or agentic presences in such deserted places. “[T]he heath was so extremely barren and so extensive,” he explains, “that no one would ever have imagined that cattle would have so closely and effectually searched it for food” (60). Yet the cattle did just that—until scattered acts of fencing prevented them, giving the tree seedlings the opportunity they needed to overgrow the dense heathers. Within a few years, these trees starved the surrounding shrubs of sunlight, converting each enclosure into a small wood. “Here we see,” Darwin concludes, “that cattle absolutely determine the existence of the Scotch fir,” which in turn determine the existence or disappearance of the heathland itself (60).

Darwin leaves unsaid what contemporary readers could easily infer: cattle are human introductions to such landscapes, so these apparently timeless heaths owe their continued existence to agricultural and pastoral practices. Decisive confirmation of this hypothesis would have to wait another hundred years, but by the mid-twentieth century, paleobotanists had analyzed enough prehistoric pollen samples to conclude that English lowland heaths like those in Surrey and Dorset were man-made landscapes; heathers rapidly proliferated across Britain first with the rise of Bronze Age civilizations, then more dramatically with the onset of the Iron Age. Soon heather pollen outnumbered pollen of tree species in much of England, suggesting major deforestation that coincided with increased technological sophistication among early inhabitants of the island. These discoveries underlie current understandings of English heathlands as unique biotic communities that develop on acidic, nutrient-poor, well-drained soils as a result of specific patterns of human cultivation. As Darwin speculated, a heath undisturbed quickly converts into woodland—typically one dominated by opportunistic species such as Scots pine (*Pinus sylvestris*, which Darwin and other Victorians called “Scotch fir”) and European white birch (*Betula pendula*).¹⁶

The accuracy of Darwin’s ecological reading of heathland seems almost preternatural—but only if we overlook his own painstaking account of the aesthetic tools he used to decode the phenomena he saw. As scholars have long observed, Darwin’s revolutionary insights are inextricable from the language he used to produce and communicate them. The tropes and metaphors of Darwin’s works cannot simply be “skimmed off,” Beer notes, to reveal the ideas underneath (xxv). Typically, however, studies of the narrative and metaphors structuring Darwin’s work privilege his notion of natural selection, highlighting the ways he personifies nature as an agent in the superhistorical family epic of evolution.¹⁷ In doing so, they overlook the way Darwin applies personification and narrative techniques on more local scales, where these techniques work

“to imagine a world of nonhuman intent and distributed sentience that is far closer to humanity than previously imagined,” as Devin Griffiths has recently observed (238). If personification and narrative frameworks applied to deep history enable Darwin to grasp the mechanism of natural selection, those same frameworks applied to smaller timescales and local actors enable him to grasp ecological dynamics: “how plants and animals, most remote in the scale of nature, are bound together by a web of complex relations” (Darwin, *Origin* 61).

Darwin’s reading of heathland suggests just how inimical entrenched understandings of scenery or landscape can be to such ecological storytelling. “[T]he face of nature remains uniform for long periods of time,” he admits, using language that anticipates Hardy’s favored metaphor for Egdon Heath (*Origin* 61). (Indeed, Beer has argued that Darwin’s facial metaphors sometimes produce “an image of uncontrollably intense and repellent anthropomorphism” that echoes through *The Return of the Native* and Hardy’s other works [66].) Yet rather than lingering over and reifying this construct, Darwin raises it only to negate it. He repeatedly dives beneath the collective personification to untangle individual stories of struggle, success, and failure. These stories reveal the contingencies behind nature’s superficial stability, showing how “the merest trifle would often give the victory to one organic being over another” (Darwin, *Origin* 61).

This willingness to think across scales in order to see how apparently insignificant agents effect outsize changes in the landscape was a lifelong preoccupation of Darwin’s. It is discernible in his early writings as a naturalist onboard the *Beagle* up through his final publication, *The Formation of Vegetable Mould through the Action of Worms* (1881). In that work, he recapitulates his enduring commitment to multiscalar storytelling and rails against those who lack the imagination to participate in it. As Darwin describes it, his study of worms, which originated with a paper he presented at the Geological Society of London in 1837, illustrates the importance of attending to “small agencies and their accumulated effects,” and of overcoming that widespread form of imaginative failure that manifests as an “inability to sum up the effects of a continually recurrent cause, which has often retarded the progress of science” (*Formation* 26).

Though much has been made of Hardy’s debt to Darwin and his supposedly Darwinian habits of attention, *The Return of the Native* suffers from just this sort of inability to see the how the actions of individual agents accumulate, reshaping and redefining the environments they inhabit.¹⁸ What makes Hardy’s oversight more surprising is that, in terms of documentary details alone, his account of heathland handily eclipses Darwin’s. Darwin depicts

heaths whose only denizens are heather, firs, and (in a belated addition) cattle. With that later addendum, Darwin intimates how heathland traditionally offered extensive pasturage for grazing animals, including (depending on custom and terrain) sheep, ponies, goats, rabbits, and cattle. What Darwin does not acknowledge is that heather and furze also served as invaluable resources for inhabitants of heathlands, people whose folkways revolved around seasonal collection and processing of the raw materials the heath offered.

The Return of the Native dutifully records the details of such folkways, providing a sense of heathland culture absent from *The Origin of Species*. Indeed, for all its apparent barrenness, heathland provides a steady supply of resources for anyone who knows how to harvest them. The root systems of heather produce excellent turf—topsoil so matted together that it can be cut, dried, and stacked to serve either as slow-burning fuel in the hearth or as construction material for housing. Furze helpfully complements turf as a fuel source, burning hotter, brighter, and much more quickly. Both heather and furze have edible components, and both can be fashioned into a variety of household implements ranging from brooms to cutlery. The ferns or bracken that spring up in wetter portions of heathland can be gathered, too, and either used for bedding material or burned to produce potash, a compound integral to the manufacture of glass and soap. In a traditional heath community, then, grazing animals might provide meat, dairy, and leather to inhabitants, while the vegetation that fed them could also be converted into fuel, construction material, wood, and chemical components of household necessities.

While heaths proved capable of making most human necessities, humans themselves proved to be necessities for the making of heathlands. Environmental historians now recognize these traditional occupations as important contributors to the stability of these landscapes. After all, each of these folkways, like the grazing of domesticated animals, involved cyclically cutting back the plants of the landscape and overturning its soils—actions that disturbed and denuded the vegetation regularly enough to prevent forests from taking over. In sum, human and nonhuman animals existed in entangled, symbiotic relations with this scrubby and strange vegetation for thousands of years.¹⁹

The chorus-like group of heath folk who occasionally weigh in on the fates of Clym and Eustacia in *The Return of the Native* demonstrate Hardy's interest in these folkways. The heath folk include "Sam the turfcutter," "Olly Dowden—a woman who lived by making heath brooms, or besoms," and numerous furze-cutters (including Clym), all of whom know how to turn landscape into livelihood (48, 25). Even as Hardy records the occupations that enabled the special symbiosis of heathlands, however, it never occurs to him

that human beings may be working to cocreate the landscape that sustains so many species. In this representation of individuals engaging with their environments, Hardy sees only futility—a futility so extensive that it includes any plants and animals that are individuated against the landscape. “[A] clump of Scotch fir-trees,” for example, becomes an occasion to portray the trees’ cruel treatment at the hands of an overpowering environment:

Not a bough in the nine trees which composed the group but was splintered, lopped and distorted by the fierce weather that there held them at its mercy whenever it prevailed. Some were blasted and split as if by lightning, black stains as from fire marking their sides, while the ground at their feet was strewn with dead sticks and heaps of cones blown down in the gales of past years. . . . On the present heated afternoon when no perceptible wind was blowing the trees kept up a perpetual moan which one could hardly believe to be caused by the air. (268)

This passage shows Hardy commiserating with the trees, which is remarkable in its way. But it also shows him utterly incapable of seeing the trees for what they really are—interlopers encroaching on the heath, interlopers that in time will destroy the landscape entirely. Instead Hardy frames them as symbolic of the same message of cruelty and hopelessness toward individual striving writ large on this supposedly monolithic, unchanging landscape.

It is tempting to say that Hardy cannot see the encroaching forest for the trees. In fact, however, he has the opposite problem: he cannot see individual agents like trees because his eye is trained on what seems, to him, like the bigger and more significant picture in the scenery. Hardy is known for his fascination with sweeps of landscape so vast and permanent that they appear to rob individual lives of significance. This version of Hardy—as a writer trying to bridge what Benjamin Morgan calls the “scalar leaps and disjunctures” between individual human lives and the sublime stretches of time associated with geology and evolution—is well established (132).²⁰ The example of Egdon Heath suggests that Hardy’s oft-observed interest in deep time actually works at cross-purposes with his equally established interest in environmental relations. Simply put, Hardy’s obsession with the sublimely interstellar vistas of cosmology, geology, and unchanging landscapes makes him incapable of seeing the significance and the outsize effects of those “small agencies” so central to Darwinian thought—and to the ecological imagination that springs from it.

Entranced by the sublime scale of landscape, Hardy overlooks the entangled agencies engendering such places. He dwells instead on what Jeffrey

Jerome Cohen calls “lithic time,” the stony endurance of the geological that first strikes human observers through a “disorienting realization . . . that we are fleeting, that this place supposed to be a home is too ancient and enduring for domestication” (78, 83). Darwin may see far fewer of the entities who collaborate to create heath landscapes than Hardy does. Nevertheless, Darwin is able to understand such entities as agents, and to imagine the effects of their interactions. It is in the act of narration—the storytelling that brings manifold beings together in some causal, metonymic, and meaningful manner—that Darwin surpasses his literary disciple. Such narration wears away at the superficially intimidating endurance of the geological, promoting “a phenomenological awareness of the constant interaction of that which is time bound” and effectively acting as what Cohen calls a “kinshipping device . . . transforming the scale across which relations unfold, opening time to more-than-human duration” (Cohen, *Stone* 97, 122).

Reading the heathlands of Darwin and Hardy side by side suggests that the best way of resolving the scalar disjunctures that occlude ecological understanding resides in a reconsideration of character and its relation to landscape. Lively as they are, Hardy’s agentic environments encourage a belief in the scalar incompatibility of human beings and natural scenery that only renders nature’s liveliness more horrifying. His writing animates old oppositions between humans and nonhumans rather than transcending them. Darwin’s reading of heathland shows how such disjunctures only *seem* self-evident; they are, in fact, the product of established but inaccurate methods of distinguishing between active agents and static backgrounds. These habits are reinforced by traditional categorical divisions between character and environment—divisions that can have devastating consequences for human beings and the non-human communities we occupy, mold . . . and sometimes eradicate.

Scene and Anthropocene

At the very same time that Hardy was crafting his unforgettable image of Egdon Heath as a timeless, untamed landscape, the heathlands of his native Dorset were disappearing at a rate of 0.6 acres per day. Industrialization, suburban sprawl, and acts of enclosure were putting pressure on traditional folkways associated with furze- and turf-cutting, foraging, and common rights, unpeopling the heaths and leaving increasingly large stretches of terrain uncut and ungrazed. In many places, the birch and conifer forest held in abeyance for hundreds or thousands of years took over. In others, the increasing efficiency of coal- and gas-powered transit made once-remote heathlands newly accessible from city centers, and real estate developers snapped up acre upon acre of this

flat, cheap landscape to provide suitable home sites for suburban commuters. (Later, during the World Wars, privately held heaths were expropriated by the government for similar reasons: they were cheap and relatively level, and they had a reputation for uselessness, making them ideal spots for construction—in this case of military bases, munitions sites, and training grounds.) Heathlands that were not neglected, built up, or paved over around the turn of the century became targets for the Forestry Commission, which was formed as a response to the shortage of timber in Britain during World War I. The Forestry Commission encouraged the wholesale conversion of heathlands into pine plantations, institutionalizing a policy of aggressive afforestation that duplicated the process of ecological succession that would have occurred anyway. By the mid-twentieth century, Dorset heaths were vanishing at a rate of 2.1 acres per day, more than triple the rates observable during Hardy's lifetime. When environmentalists finally mobilized to save such landscapes in the 1980s, 80 percent of Dorset's historic heathlands had disappeared—including most of Puddletown Heath, which once extended to the edge of Hardy's birthplace in Upper Bockhampton and probably served as the inspiration for Egdon. The disappearance of this habitat caused a concomitant drop in populations of species specially adapted to life in heathlands, including the Dartford warbler (*Sylvia undata*), the red-backed shrike (*Lanius collurio*), the sand lizard (*Lacerta agilis*), the slowworm (*Anguis fragilis*—actually a legless lizard), and the natterjack toad (*Epidalea calamita*).²¹

The loss of these heathlands is hard to process because it defies the genres we commonly draw upon to imagine ecological catastrophe.²² If heaths were what Hardy thought—pristine, primordial relics—their disappearance would fit neatly into our elegiac mode, which mourns human devastation of a once-untouched environment. The truth is more messy: in many ways, the vision of heathland promulgated in *The Return of the Native* is complicit in the value systems that have encouraged the landscape's destruction. Egdon Heath is primordial, inhuman, and apparently indomitable—all features that help obscure the sociocultural significance of the landscape, deny its fragility, and help promote the notion that heaths might be worthy adversaries for the trained forester or modern agronomist. For all its formal novelty, then, Hardy's misinterpretation of this landscape effectively reaffirmed entrenched understandings of heathlands as wild, inimical, and ineradicable landscapes. These attitudes would have devastating consequences.

Yet the very language we use to frame ecological change—*eradication*, *devastation*—makes it difficult to explain what really happened to English heathland, and to ascertain the significance of its disappearance. Heathlands,

after all, could not be eradicated or devastated by sudden human interference: they were always already altered. These human-generated habitats do not constitute some prelapsarian landscape capable of playing the innocent, melodramatic maiden threatened by the rash assaults of modernity. Their failure to fit comfortably with conventional narratives of ecological loss is exactly what makes them such valuable sites for exploring the relationship between human agency and ecological change. Like the matsutake mushroom forests whose decline and revival Anna Tsing has analyzed, heathlands circumvent Western obsessions with pristine wilderness (and its inevitable eradication) by supplying “models of well-being in which humans and nonhumans alike might thrive” (198). They offer actual sociohistorical examples of sites where “something that might be called a sustainable relationship between humans and nonhumans could be imagined” (Tsing 199).

In a sense, then, heathlands’ hybrid “nature” only compounds the loss incurred in their disappearance. The absence of English heathlands indexes the damages modernity has inflicted on nature and culture alike—including the almost insurmountable difficulty of remedying such damages. Any attempt to restore English heathlands would entail not only the remediation of environmental damage, but also the re-creation of entire economies of common rights and local manufactures driven to extinction more than a century ago. The loss of heathland is, in short, a tragedy of the commons—albeit of a far more interesting and historically attuned sort than the one Garrett Hardin popularized in his essay of that name.²³

If the special economic and ecological relations instantiated in English heaths have largely vanished, there are still ways of gathering some intellectual nourishment from this underappreciated scenery. Hardy’s heaths have much to teach us about landscape, agency, and representation. In recent years, scholars from Dipesh Chakrabarty to Donna Haraway have noted that grappling with the Anthropocene requires new ways of imagining humanity as a geological force—new stories that help us understand the manifold ways our species wields an outsize agency that can irreversibly damage the entire planet.²⁴ Heaths have much to teach us in this regard—both in themselves and in their historical misinterpretation by Hardy and others.

Heaths are an iconic example of what David Matless has called “the Anthroposcenic”—those apparently straightforward landscapes that acquire new significance in light of humanity’s belated recognition of our complex agency in relation to nature.²⁵ If Hardy’s writings alone cannot offer a model of ecological storytelling adequate to the imaginative challenges of the Anthropocene, when placed beside Darwin’s work they do provide powerful

examples of the differences between environmental attention and ecological understanding. In the process, they point up an urgent need for a more nuanced critical vocabulary surrounding the representation of environments in narrative fiction.

For too long, nonhuman environments have served as the unexamined and undertheorized background of narrative activity. Yet as a growing number of critics have observed, awareness of ecology in the Anthropocene does away with easy distinctions between individual agents and static environments, revealing a world in which “there is no definite background and therefore no definite foreground” (Morton, *Ecological Thought* 28).²⁶ The scenery is shifting beneath our feet, but we still do not have any good sense of how to read it. The lively landscapes of Hardy’s novels, William A. Cohen has recently argued, might help in this process by encouraging us “to read . . . not for plot or character, but by dwelling on . . . the ‘boring parts’” of novels, where anthropocentric narrative gives way to natural description (“Arborealities”). As the case of Egdon Heath illustrates, however, there are many ways to represent the relations of characters to environments, and the particular forms of characterization and description employed will condition our ability to understand the lived interdependence of the world we actually inhabit. Rather than standing back to admire the mere fact that Hardy relates characters to their environments, then, we must assemble more robust literary histories that examine what Nathan K. Hensley has called “the transitional space between milieu and character,” paying particular attention to the ways such spaces work to apportion agency within the stories we tell (“Environment” 679). Only then will we be able to situate ourselves and attune our values to the ecological realities of this world without background that we have started to call the Anthropocene.

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NOTES

1. For a sampling of recent criticism that casts Hardy’s novels as sources of ecological insight or models of ecological writing, see W. Cohen, “Arborealities”; Feuerstein; Kerridge; E. Miller, “Dendrography.” See also G. Levine, *Reading Thomas Hardy*, which never explicitly uses the word “ecology” but advocates for Hardy as a writer who can teach readers humility in relation to nature alongside an understanding of nature’s interconnectedness.

2. For an early and influential example of ecology as entailing the recognition of humanity's effects on an interspecies biotic community, see Leopold, especially 237–64. For the original geological proposal of the term “Anthropocene,” see Crutzen and Stoermer. The Anthropocene has not yet been officially recognized—but that is owing primarily to the formal and disciplinary complexities of codifying geological periods, not because there is substantive disagreement about humanity's impact on planetary ecosystems. For an insightful overview of the idea of the Anthropocene that examines those formal and disciplinary complexities, see Menely and Taylor 1–24.

3. On Ruskin as an environmentalist, see Kreisel, “Form against Force”; MacDuffie chapter 5; Taylor; and the essays in Wheeler. On George Perkins Marsh as an early environmental thinker, see Winter 26–39. For an overview of the intellectual history of ecology that includes Darwin's pivotal role, see Worster, especially chapter 6. On the emergence of European ecological thought from concerns about domestic and imperial resource depletion, see Grove; Jonsson; Kreisel, “Sustainability.”

4. For the novel as a turning point in Hardy's career, see, for example, Langbaum 100, where it is read as signaling Hardy's decisive break with the pastoral, and G. Levine, *Reading Thomas Hardy* 116, where it is singled out in similar terms as the first instance of Hardy's existential pessimism. Other critics who identify it as a turning point in Hardy's representation of nature include Gregor 110; Howe 113–14.

5. On the formulation of the Wessex Edition that included this general preface, see Millgate 436–38.

6. Cohn's excellent analysis is not invested in such blurred boundaries and actually treats them with suspicion, critiquing “[t]he ethically disabling discourse of becoming” they entail (509). Her article finally argues for late Hardy as an animal ethicist—a compelling claim but one tangential to the question of how to read his ecological import. For a comprehensive account of Hardy's treatment of animals, see West.

7. For examples of critics who unapologetically call Egdon Heath a character, see Fleishman 110–22; Langbaum 64. For critics who acknowledge this tradition of treating Egdon Heath as a character but go on to contest it, see Gregor 81–82; J. Miller 91; Williams 136–45.

8. These kinds of descriptions led early admirers to embrace the novel as an example of humanity's harmony with the landscape, as in Lea 67. Early environmentally attuned readings of Hardy took a similarly laudatory approach; see Enstice 81–84. Despite a more sophisticated theoretical apparatus, recent readings continue to treat such blurrings as evidence of Hardy's awareness of the profound continuities between the human and the nonhuman. See, for example, the Deleuzian reading offered in W. Cohen, “Faciality and Sensation.”

9. The opposition assumed here between metaphor and metonymy draws on the explication of these two tropes as alternative modes of linguistic relation famously laid out in Jakobson and Halle 90–96.

10. For a recent engagement with Mori's concept that includes an accessible English translation of the Japanese original, see MacDorman. Whereas I see the uncanny valley as the product of a unique tension that plays out over time between an object's excessive personification and its insistent violation of certain anthropocentric norms, others have seen it as symptomatic of the dynamics underlying all personification; see Ngai 91–94.

11. Morton convincingly posits the uncanny valley as the obverse of ecological understanding—as the product of a “hard separation of things into subjects and objects” that renders a clear perception of ecological relations impossible (*Dark Ecology* 137).

12. On Darwin, Haeckel, and the origins of the word “ecology,” see E. Miller, “Ecology.”

13. “Character” is notorious for being central to narrative but extremely difficult to define in any comprehensive fashion. Nevertheless, agency, often paired with (broadly anthropomorphic) interiority, is a common criterion for identifying characters. Some schools of narratology privilege agency over interiority, and some do the opposite. For a helpful overview of the tensions between agentic visions of character that stress the “functions” characters perform in a plot and psychological visions of character that stress depth interiority, see Chatman 108–38. For a recent attempt to overcome this traditional division by focusing on the notion of personhood, see Frow. For an influential study of the ways character apports attention and ethics, see Woloch. For a helpful survey of new directions in thinking about characters in Victorian texts, see Galvan.

14. This argument follows Caroline Levine's influential claim that literary forms enable or “afford” different kinds of sociopolitical thought. See C. Levine 1–23.

15. For recent defenses of the anthropomorphic personification of nonhumans, especially in relation to Darwinian methods and ecological understanding, see Bennett 98–100; Griffiths 245–55; Latour 57–58, 109–10.

16. For the gradual scientific confirmation of Darwin's theory, see Chadwick 38–42; Gimingham 13–16. For the role of grazing animals in the maintenance of heathland, see Gimingham chapter 6; Howkins 28–38; Parry 60–61. On the colonization of heaths by Scots pine and European white birch, see Gimingham 45–46; Parry 118–19.

17. For the groundbreaking analysis of the narrative and metaphors of Darwin's writing, see Beer, especially chapters 3 and 4. For an important recent account that still treats Darwin's narratives almost exclusively in relation to natural selection,

see G. Levine, *Darwin the Writer* chapters 1 through 3. Despite an initial focus on landscape, Krasner's visual studies approach also prioritizes Darwin's techniques of imaging evolution; see Krasner chapter 1.

18. For the classic study of the relationship between Darwin and Hardy, see Beer chapter 8. For a recent and comprehensive survey see G. Levine, *Reading Thomas Hardy*.

19. For traditional uses of turves, heather, and furze, see Howkins 11–27; Parry 62–70. For heathland wildlife and food webs, see Gimingham chapter 5; Parry, chapter 4; and—for a special focus on the Dorset heathlands Hardy fictionalized—Chadwick 166–83.

20. See, for example, Beer chapter 8; Buckland; Padian. For a recent and productive reconsideration of these scalar leaps as matters of genre, see Rosenberg.

21. On the loss of heathland because of shifts away from traditional folkways and common rights, see Chadwick 48–53; Howkins 80–82; Parry 49–53; Rackham 296–97. On the conversion of heathland into housing, see Parry 34–35, 55–56; Rackham 297. On government expropriation of heathland for military purposes, see Parry 54–55. For the Forestry Commission's encouragement of heathland afforestation, see Howkins 83–84; Parry 57; Rackham 297. For figures on the rate and percentage of decline of Dorset heathland, see Rackham 302. For information about unique heathland fauna and their decline in Britain, see Chadwick 166–79; Parry chapter 4. For an early European experiment that influenced English attempts at the “reclamation” of heath “wastelands” through cultivation and afforestation, see Winter 155–58.

22. For an invaluable exploration of the genres used to represent environmental loss, see Heise, especially chapters 1 and 2.

23. For the classic essay that uses economic analysis to pit common rights against ecological sustainability, see Hardin. For an examination of the ways this analysis fails to stand up to close reading and careful attention to cultural history, see the incisive interdisciplinary reading in Nixon.

24. For an influential account of human agency in the Anthropocene and the way it unsettles human storytelling (historiography in particular), see Chakrabarty. Subsequent elaborations of this point that focus on new storytelling modes and conceptual frames for human agency include Alaimo, Haraway, and Latour, among others.

25. For a definition of “Anthroposcenic,” see Matless 363.

26. The notion that ecological thought—especially as practiced in the Anthropocene—involves a collapsing of the distinction between (conventionally human) foreground and (conventionally nonhuman) background is pervasive in recent criticism. For other relatively recent instances of this claim, see Alaimo 1; Latour 58; E. Miller, “Ecology” 653.

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