

Seymour, Nicole. *Strange Natures: Futurity, Empathy, and the Queer Ecological Imagination*. Urbana, Chicago: University of Illinois Press, 2013.

Like all good writing, *Strange Natures* is deliciously and tantalizingly unruly. The book is a demanding but pleasurable read, intensely sincere yet irreverently playful, and thus tickles and troubles readers in the best way possible. Derved winner of the 2015 ASLE ecocriticism book competition, *Strange Natures'* intervention into queer ecology, ecocriticism and the environmental humanities successfully re-reads a selection of contemporary queer novels and films as environmentalist polemics. With chapters focusing on canonical queer texts such as Leslie Feinberg's *Stone Butch Blues* (1993), Todd Haynes's *Safe* (1995), Ang Lee's *Brokeback Mountain* (2005) and Shelley Jackson's *Half Life* (2006), *Strange Natures* demonstrates "that environmentalist and environmental-justice work are logical extensions of queer approaches" (21).

Written for scholarly communities fluent in queer, post-structuralist, feminist, critical race, and ecological theory, but also emphasizing its debts to social and ecological activist movements, *Strange Natures* engages and constructively challenges academic and nonacademic audiences alike. Yet more specifically, *Strange Natures'* productive vigor derives from its ability to trouble both queer theorists and ecocritics as a means to point out possibilities for queer ecological trans-mediation and collaborative composition. Indebted to queer theorists like Judith Butler, *Strange Natures* undoes the supposed naturalization or givenness of gender, identity, sex, race, and class categories. Yet following the pioneering queer ecological interventions of Greta Gaard, Catriona Mortimer-Sandilands and Bruce Erickson (among others), *Strange Natures* shows how queer theory can't do without ecocritical considerations of the 'natural', because unjustly being deemed 'unnatural' or 'against nature', queer bodies and identities have long been violently reduced to the same oppressive logics and ideologies sanctioning the destruction of the nonhuman natural world. Therefore, the queer ecological concept work performed in *Strange Natures* "understand[s] oppressed humans (including working-class individuals and people of color, in addition to queers) and oppressed non-humans (degraded landscapes, threatened natural resources and other flora and fauna) to be deeply interconnected" (1). As such, the intersectional queer ecology of *Strange Natures* shows how "[t]roubling the views of nature and the future that queer theorists have held, and troubling the views of nature and the environment that ecocritics and mainstream environmentalists have held, may, ironically, be the best path to an effective and inclusive queer ecological practice" (27).

In the tone-setting introductory chapter, Seymour proposes two of the books main themes; 'futurity' and an 'empathetic queer ecological imagination'. Seymour's notion of futurity re-reads queer theory's critical opposition to reproductive futurism (which queer theorists, such as Lee Edelman, have pegged to the 'naturalized' co-ordinates of the heteronormative, nuclear family) in relation to environmentalism's concern for future generations and sustainability. *Strange Natures'* queer re-imagining of futurity, therefore, operates as an empathetic means to foster kin making and ethical practices that operate outside the heteronormative figure of the property-owning private individual and one's immediate (genetic) descendants. As noted

elsewhere in the book, the “kind of empathy that environmentalism at large calls for so urgently right now is by definition queer, even when not directly linked to (homo) sexuality or sexual issues: one must care for nameless, faceless future beings, including non-humans, to which one has no domestic, familial, or finical ties” (185). In the end, the challenge *Strange Natures* impresses upon readers is the notion that socially and ecologically just futures require the demanding work of queer empathy to re-imagine non-oppressive and heterogeneous kin making and ethical practices.¹

From here, the remaining four chapters in the book work through an archive of queer films and literature, performing Seymour’s queer ecological practice of reading and writing. In chapter two, Seymour’s reading of Feinberg’s *Stone Butch Blues* (1993) operates as a means to “reduce the perceived distance between the queer and the natural” in order to oppose the characterization of gender transitioning as unnatural and artificial (39). Introducing the notion of ‘organic transgenderism’ (36), Seymour goes on to forge a queer, non-essentialist ecological ethics of care that’s irreducible to natural/constructed binaries and organic/artificial hierarchies. Chapter three performs a queer, eco-cinematic reading of Todd Haynes’ film *Safe* (1995). Here, Seymour addresses the way naturalized ‘regimes of visibility’ work to “invisibilize” both environmental concerns and queers, people of color and poor people at the same time (95). In a unique and nuanced reading of Ang Lee’s canonical film *Brokeback Mountain* (2005), chapter four inculcates queer ecological habits of viewing (138), insightfully asking readers/viewers to consider the connections that the film makes between the exploited position of the ‘unnatural’ queer and the commercial privatization of natural landscapes (107). In *Brokeback Mountain*, “nature is as much under threat as are the queers who occupy it; and the literal and figurative separation of the queer from the natural is what informs the oppression of people” (108). Finally, chapter five partakes of an ‘ironic environmentalist’ reading of Shelley Jackson’s self-reflexive novel *Half Life* (2006). Drawing on ecological thinkers like Bronislaw Szerszynski and Dana Philips, Seymour’s reading of *Half Life* reimagines notions of nature, queer and futurity as a means to articulate a non-essentialist queer ecological mindset, fostering an expanded sense of empathy for impure natural/cultural mixings.

Working in the environmental humanities, I found *Strange Natures* to be a striking and insightful resource, delivering a variety of nuanced tools that continue to push ecocritical practice in directions that address the interconnection between environmental issues and issues of gender, race, class, sex, colonialism and xenophobia. Yet, in this light, I wondered how the ecologically inflected thinking practices devised in material feminist texts like Stacy Alaimo’s *Bodily Natures: Science, Environment, and the Material Self* (2010) or Alaimo and Susan Hekman’s edited collection *Material Feminisms* (2008), would or wouldn’t speak to the queer ecological tapestry richly produced in *Strange Natures*. To be fair, in a discussion of scholarship exploring the sexual diversity found in the nonhuman biological world, Seymour is clear that her focus is not on ontological, material and biological aspects of the nonhuman natural world (21). As a result, *Strange Natures’* strategy is to attend to non-essentialist epistemologies and social/discursive

¹ On this point, I think it’s worth highlight Donna Haraway’s article in *Environmental Humanities*, “Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin” (2015). A must read for those taken by *Strange Natures* queer ecological thinking practices.

constructions of nature, gender and identity that operate, for the most part, at the level of human meaning. Yet attending to the material/semiotic and trans-corporeal practices of bodily, identity and gender production, and the way material feminists re-work theories of social construction, identity politics, gender and post-structuralism, might productively foster a trans-pollination of queer ecological thinking practices.

Evoking the complex inter-mediating logics and epistemologies weaving the 'naturally' sexed and gendered body with beliefs about the nonhuman natural world (19), *Strange Natures* works to show that nature can't be taken at "face value" (180). Seymour's troubling of the settled paradigms of 'nature' and 'gender' amount to an important challenge that's at once empathetic, imaginative, ethical, conceptual and epistemological. And if, as Naomi Klein has recently noted, current ecological challenges 'change everything' (2014)¹, then *Strange Natures'* great success is to show how a specifically queer ecological approach works to re-contextualize modes of care, attachment, being-with, activism and play, in ways that are both socially and ecologically just.

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Feder, Helena. *Ecocriticism and the Idea of Culture: Biology and the Bildungsroman*. Burlington: Ashgate Publishing Company, 2014. Print.

Despite the book's highly specialized content, Feder's work should be praised for its triumph in expanding the current discourse that approaches literature from an ecocritical lens. Though somewhat circuitous, the introduction does help to situate the reader with the book's goals. These goals are what make this book quite an academic undertaking, but one done well.

Working with theory on cultural biology and materiality, Feder believes that the Bildungsroman is the best example of a text through which we can erase the human/nonhuman binary that exists in our discourse. This manmade binary is the reason why she chooses the Bildungsroman. The product of culture, the human/nonhuman binary is an example of how culture mediates nature and the Bildungsroman, another product of culture, lends itself to the examination that Feder seeks to carry out. She argues that the genre is able to do this because it is first the origin story of culture, and that it allows for the reader to see the connection between nature and culture in various forms. She further notes that the genre "reveals an awareness of nature's agency, and human understanding" and it is this connection that is at the heart of ecocriticism. What propels the advancement of the field is the book's "effort to take biology and ecology seriously, to integrate key notions of culture from the sciences and humanities to examine the stories humanist culture tells about itself" (27). This marriage of biology, ecology and literature is exhibited in her four case studies: *Candide* and the *Dialectic of Enlightenment*, *Ecocriticism and the Production of Monstrosity in Frankenstein*, *Placing Modernity in Orlando*, and *Consuming Culture in A Small Place and Among Flowers*. The novels chosen for analysis are not your typical Bildungsroman; however, Feder's argument in each chapter is persuasive, and despite the skepticism one may have about Feder's unconventional take on the genre, the chapters will provide enough evidence to change one's mind.

Feder examines classics such as *Candide* and *Frankenstein*, but she includes a case study that examines two modern texts: *A Small Place* and *Among Flowers*. Though not very well known to most readers, these two texts offers Feder an opportunity to explore ideas of human embodiment, “animalization,” and ecosystems. It is her work in this final case study that truly elucidates her larger point. Feder notes that Kincaid’s novels provide readers with a true idea of what dehumanization looks like and how a culture can regain its humanity through politicizing their dehumanization. While she notes that all the novels provide evidence of why the human/nonhuman binary should be removed in order eradicate the existing humanist ideology of culture, Feder’s argument seems weak in the early chapters, but is truly strong in this last case study. Furthermore, Feder’s conclusion further highlights the argument that she makes throughout the novel, but without the numerous references to others’ works. At times, these references were superfluous. Her references to ecocritical theory, such as Edward Wilson’s texts and Cary Wolfe’s piece, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*, add to her analysis and help to ground her argument in foundational ecocritical texts. But there were moments where I wanted to see more of her own words.

Ultimately, Feder recognizes a way to expand current discourse on novels, some that have been picked through with a fine toothed comb, and two somewhat obscure. Feder brings new understanding to novels that one may ‘think’ she knows like the back of her hand, and what she does with Kincaid’s novels, sparks interest for potential future readers.

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Foster, John Wilson. *Pilgrims of the Air*. Devon, UK: Notting Hill Editions, 2014. Print.

Published in conjunction with the hundredth anniversary of the death of Martha, the last living captive passenger pigeon, John Wilson Foster’s book *Pilgrims of the Air* is a record of the life, demise, and culture surrounding this remarkable species, an animal now synonymous with both the sublime nature of a former America and the unrestrained consumption that erased such an avian wonder from the landscape forever. Foster—a historian and critic of Irish literature and culture—offers a more-than-meticulously researched description of *Ectopistes migratorius*, drawing upon a full chorus of early explorers, 18th and 19th-century naturalists, and early 20th-century conservationists searching for remaining specimens.

Pilgrims of the Air is published by Notting Hill Editions, which specializes in handsome publications of new and rare essays and creative nonfiction generally. Fittingly, Foster’s book is less a chronological account of the life and death of the passenger pigeon, and more an essayistic description of these remarkable creatures and the diverse ways they have been represented over time, the book alighting at various times on subjects as diffuse as ornithological art, found poetry, native American lifeways, Puritan pseudo-science, and culinary history. Because the chapters are more thematic than chronological it is somewhat difficult to finish the book with a clear understanding of the broader narrative arc. As a writer of history, Foster treads lightly, making this project less an ecocritical analysis of particular texts or

historical moments featuring conclusions drawn by a single scholar, and more a vibrant portrait of the passenger pigeon produced via a spectrum of primary sources. Well-known naturalist writers like John James Audubon and Alexander Wilson are usefully placed in conversation throughout the book with early American nature writers like John Smith, Jacques Cartier, William Wood, Cotton Mather, and Pehr Kalm, as well as lesser-studied conservationists like William Brewster, William Temple Hornaday, and Clifton Hodge.

If the awarding of the Pulitzer Prize for General Nonfiction to Elizabeth Kolbert for her book *The Sixth Extinction* is any indication, extinction is “in.” Foster’s book joins a cadre of recent publications about the history and culture of extinction generally and with avian endangerment in particular. For instance, the publication of *Pilgrims of the Air* coincides with Joel Greenberg’s *A Feathered River Across The Sky: The Passenger Pigeon’s Flight to Extinction*, a history of the pigeon that, unlike Foster’s, uses the bird as a vehicle for raising awareness of contemporary conservation issues. Mark V. Barrow’s *Nature’s Ghosts: Confronting Extinction From the Age of Jefferson to the Age of Ecology*, published in 2009, is a broad study of the roots of the concerns over extinction—including those regarding the loss of the passenger pigeon—which eventually lead to the passing of the 1973 Endangered Species Act. Likewise, Christopher Cokinos’s *Hope is the Thing With Feathers: A Personal Chronicle of Vanished Birds*, reprinted in paperback in 2009, aims to instill hope for protecting endangered species by telling the histories of six extinct birds (including the passenger pigeon), intertwined with the author’s own personal narrative of encounter with such lost species. Jennifer Price’s much earlier *Flight Maps: Adventures with Nature in Modern America* includes a very good chapter on the passenger pigeon that does some of the same work as Greenberg and Foster’s more recent histories.

While the subject of *Pilgrims of the Air* is not unique, this book differentiates itself from others on the subject by focusing entirely on what the passenger pigeon meant in its day for its hunters and few-but-heroic advocates and not generalizing about what the loss of this species might mean ecologically, symbolically, or even politically for the conservation of threatened or endangered animals today. In other words, instead of offering contemporary applications, *Pilgrims of the Air* usefully tells the story of the passenger pigeon through important historical texts whose portrayals of the bird are stitched together to indicate the biological marvel, economic boon, and narrative trope it came to represent for writers of travel and promotional texts, texts deserving of ecocritical attention. This book will be useful to scholars not only for the history it offers, but also for the important archive it uncovers for ecocritics interested in issues related to early American environments, animal studies, and the literature of conservation. Foster’s account is a kind of garden of forking paths for scholars interested in American environmental perception dating from early New World encounters to the turn of the twentieth century.

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Nilsen, Micheline. *The Working Man's Green Space: Allotment Gardens in England, France, and Germany, 1870-1919*. Charlottesville and London: U of Virginia P, 2014. 248 p. Cloth, \$39.50. Ebook \$29.50.

Gardens are one of the most persistent and powerful places where we humans interact with the rest of nature. Whether as ancient imaginations of paradise or as ubiquitous modern reality, our gardens help define our cultures and civilizations. Allotments are one important variety of garden, perhaps most familiar in North America today as community gardens. Nilsen's interdisciplinary book covers the surprisingly complex and contested history of such small gardens in Western Europe and in doing so opens up new ground for ecocritical investigation.

Working Man's Green Space is primarily structured by chronology and nation. She moves briskly through definitions and the shared early modern history of the commons, and in doing so unearths the key questions of her book—in what manner and degree do small gardens support the working classes? And how is property ownership and inequality understood or challenged?

In England, these questions were a part of politics throughout the 19th century. The Reform Acts and various Allotment Acts and societies represented a slow change from a Victorian paternal social responsibility to the conscious political interests of laborers themselves. In a pattern Nilsen follows throughout the book, brief portraits of such important and oddball characters as utopian Ebenezer Howard and well narrated case studies help to break up a dense overgrowth of facts, figures, acronyms, and dates that at times threaten to choke out the historical narrative.

Moving next to Germany, Nilsen shows how allotments “represented a smaller scale approach to the land-access question” than in England (62). She identifies four separate but related traditions: poor relief or *Armengärten*; industrial gardens provided to both pacify and support the workforce; *Schrebergärten*, which had a pedagogical function; and *Laubkolonien*, an “idiosyncratic garden/settlement pattern”— something like a slum or shantytown populated by the *kleine Leute*, the “little people” with very little wealth or property. All four have left Germany with a robust *Kleingarten* culture today.

In France, Nilsen identifies the Catholic Church's 1891 social programs with the garden initiative. Called *terrianisme* this program was based on the old practice of an idyllic and communal fishing village in which every married couple was provide with just over half an acre: the community was “free of social strife and alcoholism” (101). Implemented throughout France, these gardens were remarkably successful.

In all three countries, gardens represented moral and economic reform. They were presumed to inculcate thrift and a strong work ethic, as well as physical health, temperance, political engagement, and patriotism. In her final and most interesting chapter, Nilsen argues that allotments fostered an aesthetic of their own—gardeners often grew flowers and took pride and pleasure in the layout and maintenance of a tidy plot. This was not always the case, in some places there were depressing unkempt lots as well. Nilsen's interpretive arguments are an indication of the further work to be done with the detailed historical archive she has provided. As she notes in closing, “the social, cultural, and political forces...still obtain today, albeit in different forms” (175). More work on allotment gardens is now possible, perhaps taking into account the political ideology and efficacy of allotments, as James C. Scott has done with other

forms of agrarianism, or by reading it in conjunction with the work of Michael Pollan or Wendell Berry. Another area that is under-examined is the gendered aspect of the allotment gardening movement, since plots were often assigned only to male heads of household. Still, this book makes important contributions to those seeking facts to justify the claim that gardening is a subversive and resistant act, as well as potentially regenerative and empowering.

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Cohen, Jeffrey Jerome, ed. *Prismatic Ecology: Ecotheory beyond Green*. Minneapolis: University of Minnesota Press, 2013. Print.

I began Jeffrey Jerome Cohen's edited collection *Prismatic Ecology: Ecotheory beyond Green* while flying 30,000 feet above the Mississippi River. I flew over its meeting with the Missouri River near St. Louis, two brown channels that come together and turn south to run past the city, before flying over the brown floodplains and frozen cornfields of the Midwest to Toronto, and then over the icy lakes and snow-covered mountains en-route to Vancouver. These varied landscapes and their winter hues formed a perfect backdrop to the essay collection, because Cohen's assemblage is an ambitious collection of literary and cultural theory that looks to expand and interrogate the "green" dialectics that have populated so much ecological theory, ecocriticism, and environmental studies. Cohen notes in his Introduction that "green dominates our thinking about ecology like no other, as if the color were the only organic hue, a blazon for nature itself"; but such assumptions are dangerous, because "green readings have a tendency to reproduce what Bruno Latour calls the Great Bifurcation, a split between nature and culture that founds a structuring antinomy even in the face of constitutive and intractable hybridities" (xix-xx). Green criticism certainly has its place in the world, but Cohen and his collaborators look to embrace a "multihued agency" that embraces different colors in their respective materialities by focusing on human and nonhuman actors, including "mysterious forces, objects and organisms that do not fully disclose themselves, radiation, black holes... shit and muck... disability, distillation, capitalism as an ordering system, domestication, alien substances, supernovas, urban sprawls, the undead, lost worlds... human indifference, negativity, depression, the aurora Borealis, deep-sea dwellers...failure, queerness, violence, swamps, [and] an errancy of earth and seas and skies" (xxiii). The power and engagement of the multihued actants in the volume unites the assembled essays and brings new insights to ecocriticism, shining green light into a prism and creating a bewildering range of shades, tones, and forces.

In introducing the volume, Cohen writes, "color makes a restlessness, in inherent vivacity, within matter. It invites contemplation of the complicated agency of the stones, animals, plants, forces, architectures, palpable and invisible elements that compose ecologies: of their beauty, their fragility and resilience, their ability to sustain relations far deeper than anything analysis can plumb" (xiii). The biggest strength of the volume is the way that it uses its prismatic *modus operandi* to engage with a diverse interdisciplinary and multi-historical range of texts and topics. Proceeding along the color spectrum, *Prismatic Ecologies* begins with Bernd Herzogenrath's depiction of a "white ecology" that includes white as a skin color and the "vital force" and "sonic

geography” of snow (7). Tobias Menely and Margaret Ronda’s “Red” tells the story of the Cave West slaughterhouse in Redmon, Oregon, and its destruction by ecological activists, while Lowell Duckert examines the “Maroon” Northern Lights described by eighteenth-century Arctic explorer Samuel Hearne.

Some of the essays in the collection focus on color as a symbol of cultural or psychological meaning for humanity, especially Robert McRuer’s, which analyzes cologne designed for gay men, tourist destinations that cater to LGBT people, and other cultural artifacts that reveal the connection between homosexual identity and “Pink.” Similarly, Julian Yates uses a “prismatic grammarology” to restore the lost meanings of “Orange” to British culture, from the Wars of the Roses to George Orwell’s *1984* (85), and Allan Stoekl’s “Chartreuse” makes a surprising but convincing connection between the highly-regulated and claustrophobic lives of Carthusian Monks and living with Autism Spectrum Disorder. Will Stockton’s “Beige” focuses on the color’s sense of neutrality and intermixing on both an astrophysical and a human scale (in terms of sexual identity, pornography, and human waste), and Eileen A. Joy’s revelatory “Blue” seeks to “think about depression as a shared creative endeavor, as a transcorporeal blue (and blues) ecology that would bind humans, nonhumans, and stormy weather together” (213). Joy draws on her own experience as well as Old English poetry, modern literature, and recent ecocriticism to assess “feeling blue” as both an interior physiological sensation and an element of the wider world (214).

The final five essays voyage to and beyond the end of the visible spectrum, and in doing so, they bring further ecological illumination on human existence. Stacy Alaimo’s “Violet-Black” examines life (and its lack) a thousand meters below sea level; at this depth the seas “epitomize how most ocean waters exist beyond state borders, legal protection, and cultural imaginaries” (233). Ben Woodward moves past the visible quality of nature (the deer, worms, and plants of the forest) to posit an “Ultraviolet” ecology that reveals “the deeper dimensions of the seen by the unseen” and exposes “unthought unseens and the possible connections between actualities already known” (253). Cohen meditates on the liminality of “Grey” (at each day’s twilight, or the flesh of the undead zombie) as “a moribund realm, an expanse of slow loss, wanness, and withdrawal, a graveyard space of mourning” (270), and Levi R. Bryant uses science fiction and philosophy to reveal the contrasting “connotations of despair and abandonment” and “issues of race, minoritization, and second- and third-world countries... disproportionately affected by climate change” that are associated with “Black” (291). The volume’s final essay, Timothy Morton’s “X-ray,” is a study in contrasts, because he states that “X-rays confuse the commonsense difference between light and matter, since they directly wound and destroy life, even as they illuminate it, brighter than bright” (311). Morton uses Kant, Heidegger, and other philosophers to argue exactly how “an X-ray photon is a terrific example of a nonhuman that has agency—it is evidently not alive, yet it is evidently agential” (311).

My beloved Mississippi looms large in this collection, beginning with Cohen’s invocation of its varied and colorful agency. He illuminates the full spectrum of the river’s vibrancy, from the “Edenic space” of the “Green Mississippi,” to the “Blue Mississippi” that serves as a foreign place to us as earthbound creatures, as well as the murky brownness of the “Muddy Mississippi” that is a place of “interstices, mixing, hybridity, autonomy, cogency” (xxvii). These hues connect to the numerous meanings that the river has symbolized for humanity over the millennia, from homeland to alien world, plentitude to catastrophe, and drought to flood. Steve Mentz’s “Brown” adds to this construction by describing how the swamps of the Mississippi River Delta,

along with boundary-marking sand and stinking bodily excretions, reveal that brown “is the color of intimate and uncomfortable contact between human bodies and the nonhuman world” (193). Mentz combines the allegorical “worldly failure and alienation from the divine” embodied by John Bunyan’s Slough of Despond in *Pilgrim’s Progress* with Bruce Barcott’s “dashed pen strokes of the barrier islands, a dozen or so thin beachheads, and beyond, a porous system of open bays, canals, salt and brackish marshes, and freshwater swamps” of the Mississippi delta to reveal that “all things connect and cannot escape into separation, and in the face of soupy, smelly, brown existence human intelligences struggle to grasp fleeting separations and imperfect categorizations” (200 and 209).

Another highlight of the volume is Graham Harman’s essay on “Gold.” Harman’s groundbreaking “object-oriented philosophy” holds that, “objects exist at many different levels of complexity, and they are always a hidden surplus deeper than any of the relations into which they might enter” (106). He presents the long history of gold, notes the importance of its various chemical properties, and considers its effect on humans “who are dazzled by its splendor, corrupted by its value, and made cruel through their ravenous hunt for the metal.” In the process, he observes its interactions with “bacteria, governments, collapsing stars, geothermal currents, and mountain streams” (107). Vin Nardizzi’s essay “Greener” invokes a similarly charged color term in order to get past the adjective that is so en vogue with popular environmentalism and discuss the “ecoapocalyptic science fiction” of Ward Moore’s 1947 novel *Greener Than You Think* (148). The midcentury American novel is about grass that spreads from one yard to cover all of Los Angeles, and Nardizzi focuses on the grass’ “polyvalent status as allegory” representing “the movie industry’s stranglehold on Hollywood... suburban sprawl, mob mentality, communist infiltration, and capitalism” (148).

There is an enlightening thread of linguistics and etymology running throughout the collection, which provides a semantic foundation for many of the individual chapters—from the association of red with centuries of European revolutions, to *marron* (“chestnut”) and “firework” in the etymology of maroon, to the origins of chartreuse in the founding of the Carthusian religious order a millennia ago. Furthermore, Cohen draws on the histories of words like “ecology” and “environment” in both his introduction and essay, and Duckert meditates on the mythological origin of the “aurora borealis” and its power as a “beacon” that urges warning or celebration. The essays in *Prismatic Ecology* also draw heavily from the earlier scholarship of contributors, most notably Timothy Morton, as well as critics like Latour, Jane Bennet, Gilles Deleuze, and Félix Guattari. Therefore, the book serves as a primer to a number of different postmodern theoretical disciplines (beyond its ecocritical futurism), including nonhuman agency, object-oriented philosophy, Latourian actor-network theory, vibrant materiality, and Deleuzoguattarian assemblages. The volume certainly delivers on its promised vivacity and theoretical fracturing of the visible spectrum, but the argumentative and analytical edge is sharper in some essays than in others. This deficit is only a minor one in the grander scheme of the volume, however, because the combined effect of what Cohen calls “a restless expanse of multihued contaminations, impurities, hybridity, monstrosity, contagion, interruption, hesitation, enmeshment, refraction, unexpected relations, and wonder” is revelatory (xxiv). Our world is not the “Green Eden” of traditional ecotheory and ecocriticism, but instead a restless and monstrous expanse, and *Prismatic Ecology*’s contributors have woven their individual threads into a similar creation that, like the Mississippi, combines to form “a swirl of colors, a torrent, a muddy river” (Cohen xxiv).

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Brazeau, Robert, and Derek Gladwin. *Eco-Joyce: The Environmental Imagination of James Joyce*. Cork: Cork University Press, 2014. 329 pp. ISBN: 978-1-78205-072-8.

No matter the approach, Joyce's text always gives the impression that it has been waiting for critics to catch up. Nevertheless, and despite the pressure (in an innovation-driven discipline) to pair anything with everything, *Eco-Joyce* is not an obvious choice, and must have required some persuasive art to succeed. That in 2014 there still had "never been a volume that focuses on the environmental themes found in [Joyce's] writings," as the editors write, suggests the project must have faced considerable writerly and market resistance (1). The belated but fortunate product is a work which, for the most part, does not smooth over its internal conflicts, but uses them strategically to open the field(s) and generate a sense of mobility for both environmental criticism and Joyce studies.

The moment that brings together these fourteen essays, a number of which are by superb international experts in Joyce, is favourable. Robert Brazeau and Derek Gladwin point out that ecocriticism flourishes as environmental problems become more deleterious (5). Perhaps one senses this best in overtly pro-business phases of the political economy, when policies of lax regulation look a good deal like environmental injustices against disempowered populations. Thus, Fiona Becket notices Joyce's texts resisting the fact "that capitalism's priorities overwhelmingly obstruct [...] effective solutions" to climate change, Yi-Peng Lai connects the Tree-Wedding in "Cyclops" with the history of Ireland's centuries-long deforestation, and Cheryl Temple Herr opens "Joyce and the Everynight" by discussing massive problems with sewage disposal and public health in Dublin, uncovered by a Royal commission in 1902 (21, 39-40).

The elephantine difficulty is to understand precisely how Joyce studies and environmental criticism can speak together (beyond these sorts of historical/bioregional treatments), at what intersections they collide, and what mutual problems they might be able to address. *Eco-Joyce* reinforces the impression that the fields have different methods and bases, and, keeping to the political theme, we can hear different dog whistles in the volume. Representatives of the two fields do find fault with each other's results, sometimes rather harshly. Fiona Becket, saying she is following Timothy Clark, worries about "the pieties and parochialisms of ecocriticism," and an experienced ecocritic is likely to find the word "natural" wielded too indiscriminately within some of the Joycean essays, as demonstrated below (26). One of the Joyceans most experienced in ecocriticism, Bonnie Kime Scott, agrees a gingerly approach to merging Joyce scholarship with the concept of an environmental imagination is warranted. There is good reason for hesitation. Yet she says an inventory of natural sites and their thematic functions across the corpus may lead astute Joyce readers "to consider the environment in a blended way defying the binary" of nature and culture (66).

Even as an exploration of opposite resistances, *Eco-Joyce* raises fascinating questions. One of the most interesting confrontations is within Erin Walsh's "Word and World: The Ecology of the Pun in *Finnegans Wake*," where unstoppable language meets an immovable materialism: "not as semantic architecture, accessible by key, but rather an ecology of structures," "an ecological mind" working with "ecological language," cultivating "shifting material-symbolic territories" such as "the bio-semiotic figure of the Liffey" (75, 74, 81, 82, 88). Most versions of environmental criticism bring an eye on the future, not often utopian, and a sense that the planet is more than human-constructed, even queer. Here, the Joyceans have made a strong but complicated effort to fit in. For example, Garry Leonard tells us that he adheres to Lawrence Buell's criterion for evidence of an environmental imagination, wherein "the nonhuman environment is present not merely as a framing device" (267). Herr explores how *Finnegans Wake* anticipates Timothy Morton's phrase: "human being is just one way of being in a mesh of strange strangeness" (57). In "'Sunflowered' Humanity in *Finnegans Wake*: Nature, Existential Shame and Transcendence," James Fairhall adopts Stacy Alaimo's rich trans-corporeal approach to show how, in a circulation flowing between "the poles of transcendence and shame," "the body endows us with pleasure and delight" (231). (However, he is one of the essayists who occasionally uses the word "nature" very casually. When Fairhall writes, albeit beautifully, that neither *Ulysses* nor *Finnegans Wake* "embodies an impulse to flee from the biological realm into the Byzantium of art. Their 'sunflowered' main characters reach up, like the lotus or the tree of life, while remaining grounded in a web of natural relationships," one feels an urge to dive into the "biological realm" of that "natural" and undo its apparent innocence (245).)

Garry Leonard makes clear that what is in play "is Joyce's Nature, not Wordsworth's," a nature which "ambushes" more than it cajoles (247). Leonard says Joyce does not pretend to represent an unobstructed account of the nonhuman: "knowing *how* they see makes clear what they are *able to see* ... a 'future' that is already pre-ordained by what one's modality brings forth as 'evidence'" (251). Nature, in the person of Proteus, "furiously shape-shifts until he is forced to, in essence, take on the shape of your question in order to answer it" (251). Here, "what is ineluctable" is not the body, or the planet, but "the shifting" (249). In Margot Norris' "Negative Ecocritical Visions in 'Wandering Rocks,'" Joyce's environmental imagination is not naive. He writes the city as "an ecological disaster" characterized by urban sprawl, poverty and abandonment of care (114). He produces "sentiments... that work in opposition to an ecologically sensitive sensibility," "a series of anti-ecological world-views" (114). For example, Father Conmee's love of aristocracy is translated into the imposition on the planet of the great chain of being, silencing any voice but his own (120). Such an environment is de-imagined more than imagined, and becomes venomous to humans: "cold specks of fire, evil, lights shining in the darkness" (119, citing *Ulysses*). Brandon Kershner says Joyce also revives some older de-imaginings about the arena of the natural. Kershner traces how Stephen makes nature a symbol which provides him with epiphanies, "Eveline" is a world of Darwinian struggle, and the "west" signifies a cultural utopia masquerading as natural (135, 129). In this reading, Joyce's environment has no independent existence at all: "This realm is never directly confronted, but is omnipresent as a boundary to merely human actions and desires" (127).

Despite their incompatibilities, the essays together demonstrate that Joyce's narratives and an environmental imagination, taken broadly, are not ill-assorted; at various points, Joyce's major texts are made to address issues of scale, from the local to the cosmic, and point of view, from thinking like a cat to thinking like a mountain. Environmental criticism's vocabulary is put to work to reimagine, as Eugene O'Brien points out, how "the human body is at the core of

[Joyce's] aesthetic experience" (208), as are the power tools of the "ecology" that Norris defines as "the science of relationships" (113). For instance, Robert Brazeau draws on evolutionary psychology to imagine how Gabriel's wayfinding skill helps one to map the "biological substrate" in "The Dead" (216). Here nature functions as the return of the repressed: "Culture [...] persistently works to suppress the relationship between our biological selves and the natural world on the one hand, and our minds on the other" (217); Brazeau says Gabriel's use of evolved wayfinding produces "a deeper knowledge of the places and people around him," and forces Gabriel to confront that repressed material.

Finally, Derek Gladwin's careful essay takes up Joyce's work with place, space and the possible autonomy of the nonhuman. Here, Joyce's bent toward the "anti" is isomorphic with environmental criticism's resistance to exploitation; it may therefore stand to summarize the contribution of *Eco-Joyce*. Gladwin notes the peculiar twist Joyce gives to what was supposed to be a hired, convention genre piece. "In two particular articles published in the summer of 1912," Joyce "presented a subtle and subversive commentary on travel writing as an ecocritical examination of place" (176). In these, Joyce writes the land as resistant: the Aran Islands are an "obstacle for the British navy"; Irish cultural and racial purity associated with the west is undermined when Joyce offers an alternative imagined Galway, a "Spanish city" if the Spanish Armada had survived (187, 188). Moreover, the "thickness" of place is caught by Joyce in phrases such as "the friar, uttering prayers of exorcism, shakes his aspergill on the sea, and divides the dark air in the form of a cross" (178, 184, cited from "The Mirage of the Fisherman of Aran"). In other words, Joyce "recognizes the emergence of a place-attachment within a given geography that unmarks various cultural and historical codes" (194) but a place that is gnomic, revelatory, epiphanic. Joyce critics and ecocritics gather in opposing, in Leonard's phrase, "whatever purports to explain 'everything'" (250). *Eco-Joyce* makes the case that environmental criticism offers Joyceans a broad conceptual space which can accommodate many different systems of ontological logic; what Joyce scholarship offers environmental criticism is also interesting: the Joycean gnomon, a thickness of language that congeals with the thickness of the planet.

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Piper, Karen. *The Price of Thirst: Global Water Inequality and the Coming Chaos*. Minneapolis: University of Minnesota Press, 2014.

Students often say they want to read environmental success stories; they want to hear some good news about what humans are doing on earth. For these students, about a page or two of Karen Piper's book *The Price of Thirst* would be perfect, though they will have to dig hard and cobble that page or two together from a sentence here, some of a paragraph there. It's a dark book, the other 99.5% of it, about how something that ought to be a basic human right, access to clean water, has become instead, under the neoliberal combination of transnational capitalism, market fundamentalism, and crony capitalism, a tool of oppression, a means for the haves to have more by taking from the have-nots. The book is an exposé, part investigative

journalism, part first-person outrage, part an academic's cynicism. And while that cynicism and outrage can sometimes result in a tone that undermines Piper's points, the overall argument is poignant, the author's critique repeatedly incisive, and her eye for the telling irony always well-trained. The book would be less dark if frankly there were better news to tell.

In the book of Job, Job laments the persistent injustice of the world: the poor are naked, he says, and "hungry, they carry the sheaves; among the olive rows they make oil; they tread the wine presses, but suffer thirst" (Job 24:10-11). This kind of ironic, but deeply felt juxtaposition—that the very occupations that feed the wealthy starve the poor—is Piper's stock in trade, a collaging of the inequities that have accompanied water privatization around the globe. We see water cannons used against thousands protesting against the privatizing of the Ganges River in India. We see how privatization of Egypt's water utilities led to enormous rate hikes and political and social upheaval, but also led to consistently growing profits for gated suburban communities that receive ample water while the downtown poor do not. And we learn in a chapter on California that the billionaire owners of Fiji Water, the Resnick family, are also majority shareholders in the Kern Water Bank, a twenty-thousand acre underground reservoir in the San Joaquin Valley, which allows investors to benefit in times of drought by selling water back to the state of California—water that they had purchased from the state for very little. "Today, subsidized water that Resnick receives from the state for an average of \$30 per acre-foot can be sold back to the state for \$200 per acre-foot" (61). At the same time, the Resnicks and others are building sprawling new housing projects, "private cities," whose water they will also control. Meanwhile, those migrant workers who labor in the groves and fields of the San Joaquin Valley are California's least food-secure, unable to afford food because of low wages from owners like the Resnicks. And yet, as Piper points out, in a coup-de-grace of irony, these same impoverished workers are often touted as evidence that California's billionaire farmers ought to have even greater control of the water supply than they already do. The ironies deepen at every turn, as we learn more and more about the backroom negotiations that convert streams and glacial melt and even tax dollars into privately held commodities.

Similarly, in her chapter on dam-building and the privatization of water markets in Chile, Piper points out that glaciers are protected by the Chilean national Water Code and as such "cannot be bought and sold and are not defined as private property" (94). Nevertheless, Endesa Chile, the formerly state-run, now-private electrical utility company that has sought to build major hydroelectric dams in especially environmentally sensitive areas, "has already registered future glacial melt for ownership" (94), which means that the company stands to benefit from global warming in more than one way.

Ironies in the book that are less successful tend to be like synapses that misfire across the gap, juxtapositions that come across as too easy or too forced. In the Introduction particularly, Piper uses a number of scare quotes to cue the reader how to think, and her attitude towards "one kind of language... scientific, economic, and international... spoken in corporate boardrooms, academic halls, and government meeting rooms" as opposed to "the language of the 'antiprivatization' groups, who focus on water as a 'human right' or a 'right of nature,'" even to a reader predisposed to agree with her broad generalization, seems far too monolithic (35). On Twitter, I follow a dozen or so non-governmental organizations that regularly mash linguistic registers and switch codes consistently in support of universal access to clean water. It's a matter of debate whether their diction is problematic; that we routinely (and blindly) support

economic and political systems that allow water, a biogeochemical given of the earth, to be sold in such a way that those who tread the wine presses thirst—this point is not debatable.

It is not until her conclusion that Piper addresses the question that troubled me throughout: “Who will pay for it?” (221). Water comes in rain and rivers and wells as we participate in the hydrological cycle, and yet when rains are full of sulfur, and rivers have been dammed, diverted, polluted, and purchased, and wells swim with pesticides, the vast majority of us rely primarily on intensive and expensive processes of purification to be able to drink it at all. Who pays for this? Garrett Hardin suggested years ago in “The Tragedy of the Commons” that when individuals benefit from a commons, the costs redound to everyone, and the two most logical political and economic solutions are either to privatize everything—easier done with land than with water or air—or to regulate through governments beyond most people’s comfort zones. As Nobel laureate Elinor Ostrom showed, there are community-based solutions that can escape this market-government dichotomy, which has made American politics so bitterly partisan over the last thirty years of neoliberal dominance. The terror of Piper’s book is to show how few of our attempts to solve the tragedy of water inequality have recognized any value in community-based solutions at all. Instead, repeatedly, markets and governments collude to make access to clean water *more* unequal. Who pays? We all do: the poorest of us more than others.

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Lane, Melissa. *Eco-Republic: What the Ancients Can Teach Us about Ethics, Virtue, and Sustainable Living*. Princeton UP, 2012. 256 pp. Paperback 19.95, Hardcover 45.00.

It may seem unusual to look to Plato in hopes of exposing and confronting unsustainable means of thinking and being in the world—especially given the temporal distance he has from the environmental crises we face today—but Melissa Lane’s *Eco-Republic* does so in surprising and illuminating ways. She seeks to answer if in “clinging to the comforts and familiarities of our current way of life and its fossil-fuel infrastructure, despite a mounting consensus of scientific studies documenting the damage which this is doing, are we trapping ourselves in Plato’s Cave?” (4). Using Platonic theory, Athenian and Spartan history, and especially the *Republic*, Lane examines ways of rethinking connections between *ethos*, *polis*, and *pleonexia* (overconsumption). The book interprets our contemporary environmental crisis as a result of a flawed political imagination. By looking to Plato, Lane is able to interpret some of the problems with head in the sand approaches to issues like sea-level rise, ocean acidification, and global warming. Lane argues that these large-scale disruptions are evidence of smaller imbalances between what “the ancient Greeks [called] the relationship between *polis* and *psyche*, between city and soul” (15). City and soul is a salient way of thinking about political ethos and our collective value system that promotes unsustainable lifestyles and politics.

Lane’s work opens the door to numerous other writers becoming part of the ecocritical conversation. Her approach, which blends philosophy, political science, history, science, and

rhetoric, approaches some of the material that J. Donald Hughes covers in the recently revised and expanded second edition of *Environmental Problems of the Greeks and Romans: Ecology in the Ancient Mediterranean* (originally titled *Pan's Travail*). This helps to further reveal that these writers faced numerous ecological issues of their own, and perhaps they have more to say than we might think. Beyond this book's important contribution to environmental studies, her clear and engaging prose, which successfully connects ancient text with modern events, will also work well in a variety of college classrooms. Because of the interdisciplinary approaches Lane employs, this book has relevance to many in both the sciences and humanities. I personally look forward to a day in which I can teach a class on ancient environmental rhetoric using *Eco-Republic*, though this is only one of the numerous possibilities this important contribution opens up.

She also addresses some of the problems of using Platonic theory in our contemporary conversation, and she does an excellent job of arguing why these issues should not leave us throwing out valuable ways of thinking with the proverbial bathwater. Lane does not echo Plato's images of the select few who are able to cast off their chains and leave the cave because she insists that sustainability must be democratic and widespread. However, she does see a reflection of the messengers from the outside world in the way that the "idea of man-made global warming has been met with [greeted] with as much hostility and ridicule as Plato's cave denizens mustered for their unwelcome messengers from the outside world" (5). Lane's revisions of Plato's *Republic* help us better understand the contempt he shows for democracy and why we must use these criticisms to our advantage. She reminds us that even as we do so, "we must be conscious of the elements which have nourished totalitarian uses and interpretations" (80). What is so important about *Eco-Republic* is in its reinvisioning. Lane finds in Plato "aspects of the psychosocial dimensions of sustainability that [...] do need to be [incorporated] into a liberal society using liberal means" (81). Her work serves as a model to those who wish to reclaim historical texts in the face of ecological crises. Her book warns that if we fail to address these problems, "it is possible that the environmental and social stressors which climate change will bring about will undermine not only the sustainability but also the liberalism of our society" (81). This work is important and timely, accessible and yet deeply engaging. If you want to rethink some of the basic premises that underlie our current environmental crisis, you should read this book.

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Schliephake, Christopher. *Urban Ecologies: City Space, Material Agency, and Environmental Politics in Contemporary Culture*. Lanham, Maryland: Lexington Books, 2015.

We now inhabit a thoroughly urbanized planet. Indeed, as Christopher Schliephake notes in the opening chapter of *Urban Ecologies*, "the twenty-first century will be, for the first time in the history of mankind, an urban one on a global scale, with more than 75 percent of the world's population living in cities" (2). Such a world, of course, presents challenges to urban planners,

public health advocates, environmental stewards, and resource managers. Yet as Schliephake sees it, the economic inequities and ecological distress that urban residents across the planet confront also pose challenges for readers of publications such as *The Journal of Ecocriticism*, particularly for those who remain committed to the nature essay or pastoral poem as the texts most worthy of ecocritical analysis. That approach may have worked when the field was young, but cannot suffice when we consider massive cities such as Kuala Lumpur. As Schliephake rightly points out, such cities can no longer serve as the unnatural counterpoints to forests and farms. Rather, they are, “above all, material processes. A space of fleeting, inter-relating bodies, material agents, fluids, and substances that continually changes and emerges in ever newer configurations” (191). If ecocritics hope to remain relevant within the academy, he implies, their scholarship must more fully come to terms with this new urbanized world.

By itself, this is neither a startling nor original claim, and Schliephake devotes perhaps too much attention up front defending its uniqueness, thus creating a straw man that his argument does not really need. Indeed, he acknowledges in his opening survey of the field that urban environments have *not* gone unnoticed within the environmental humanities. For Schliephake, however, well-meaning efforts to address city spaces can seem “under-theorized” if they do not question “how an urban environment relates to its wider surroundings” or consider that a city “could be viewed as an ecosystem itself” (xiv).

And herein lies the value of Schliephake’s book. Drawing heavily on recent explorations of materialist ecocriticism and an impressive range of scholarly sources, he examines contemporary urban ecologies as they are represented in cultural productions such as non-fiction prose, disaster documentaries, television, and science-fiction cinema. In so doing, he helps extend the boundaries of theoretical reflection to texts and spaces that deserve closer attention, all while keeping a sharp critical eye on his own approach as well as those of others.

Each of the four lengthy and detailed chapters (some editing down for size would help) approaches contemporary urban situations through the lens of a different genre. The first chapter closely examines recent non-fiction texts by Mike Davis, Doug Saunders, and Katherine Boo that consider the form and material conditions of emerging “hypercities” such as Mumbai, Caracas, and Nairobi. With their desperately poor neighborhoods and ongoing migration from rural areas, such sites connect millions of people with an untold number of biological and environmental agents that originate near and far and then circulate out once again into the broader world. They seemingly affirm the book’s closing sentence: “After all, cities are the places *where everything is connected to everything else*” (193). His selected non-fiction books, in turn, provide Schliephake rich opportunity to place bioregional approaches to the study of place against the work of critics who challenge bioregionalism as insufficiently attuned to globalized forces. Here, he draws heavily on the work of Ursula Heise, to the point of titling the opening chapter “(Eco)-Cosmopolitanism” – a not-so-subtle nod to her much discussed concept.

In Chapter Two, the attention turns to inner-city Baltimore, as depicted in David Simon’s critically acclaimed HBO series *The Wire*. Here, Schliephake shifts from the fast growing hypercities of Asia and the global south to an older American city reeling from the legacy of deindustrialization and poverty in the neighborhoods just beyond its sparkling downtown. Readers not overly familiar with the series will likely have trouble following the discussion of episodes occurring over several seasons. But recent news events have made us all familiar with

the disastrous results of Baltimore's loss of inner-city jobs and the endless War on Drugs that has brought so many of its residents into the criminal justice system.

As Schliephake suggests, *The Wire* opens inner-city space to discussions of narrative technique – not through the simple act of mimetically representing distressed city space, but by the ways its scripts construct “storied” terrains from the “constant change of perspective” that define the overlapping plots and the “the careful exploration of the interaction of inhabitants and their environmental surroundings....” In this sense, he argues, *The Wire* is both a “powerful political statement” and a show that “has completely altered and expanded the way in which television series are made” (84, 85).

Chapter Three – to my mind, the most effective and direct in the book – considers representations of New Orleans and Hurricane Katrina in two film documentaries and the HBO series *Treme*, which like *The Wire* was created by David Simon, who Schliephake calls “America’s great urban storyteller of the last decade....”(120). These works do not present Katrina and its aftermath as the kind of great natural disaster that tragically visits cities from time to time. Rather, the storm’s fury revealed decades of bad planning and misguided attempts to control nature in and around one of the nation’s great cities. It was a technological disaster unleashed by a seemingly natural event.

The fourth chapter examines classic and contemporary science fiction films in order to consider the ecological implications of “More-than-Human” cities now and in the future. Here, human and technological forces come into direct conversation, often quite darkly.

Schliephake’s book will appeal to students and scholars who have pushed for more theoretically rich and textually diverse forms of ecocriticism. At times, the prose becomes overly dense with sentences that run far too long. The long chapters, too, could be pared down without loss of effect or intellectual rigor. Still, the approach holds up rather well and should open new scholarly routes into our urban settings. In recognizing the centrality of cities for the twenty-first century, Schliephake smartly makes the case that “The environmental humanities should claim their seat at the table” whenever and wherever conversations about our future cities arise (193).

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Capra, Professor Fritjof, and Pier Luigi Luisi. *The Systems View of Life: A Unifying Vision*. Reprint edition. Cambridge: Cambridge University Press, 2016.

The Systems View of Life is a textbook-style primer in systems thinking. The title indicates a focus on biology, but Capra and Luisi also address the implications of systems concepts for physics, mathematics, sociology, spirituality, and other areas. What recommends the textbook the most is its format: the short numbered chapters make it easy to flip to a section on fractals,

emergence, self-regulation, the Daisyworld model of the earth system, or the role of networks in ecology. Perhaps more than any other introductory work on systems theory, Capra and Luisi's textbook gathers all the major strands and explains them in an accessible way. This is no small task, since the basic components of this synthetic field are scattered widely across sciences that often do not communicate with each other. While some might associate the term "systems theory" with the cybernetics that emerged from the interdisciplinary, scientific wing of the Anglo-American war effort, others will think instead of Niklas Luhmann's sociology, of ecosystem ecology of the 1960s and 1970s, of the *Whole Earth Catalogue*, of efforts to create adaptive AI, or of chaos theory. *The Systems View of Life* gathers these threads in one place, for the first time, in a text accessible across the disciplines.

In eighteen chapters, Capra and Luisi cover the history of mechanistic/reductionist and systems/emergentist approaches to the natural and social world, early and mid-twentieth-century developments such as cybernetics, late twentieth-century developments such as chaos theory, autopoietic and symbiotic theories of life (as opposed to gene-centric ones), theories of self-organization in chemistry and biology, evolutionary theory, debates about the origin of life, systems theories of mind and consciousness, the ecosystem concept, and the systems view on issues such as health care, climate change, economic growth, and corporate law. Systems thinking turns out to be relevant to everything, a totalizing ecosocial paradigm. Throughout the text, however, and despite this diversity, the single basic focus is on holism, emergence, and self-organization. These concepts present the difference that makes a difference (to borrow a phrase from the systems thinker Gregory Bateson) of Capra and Luisi's approach. The whole is greater than the sum of its parts; systems have properties that can't be found in, or predicted from, their basic elements; negative and positive feedback loops stabilize and destabilize systems; and systems have the capacity to produce themselves, in a circular or recursive way, out of their own elements. On this theory, the basic elements cannot be ontologically privileged over whatever is composed from them. Patterns of organization have as much reality as material elements. This is also the case for biologists Humberto Maturana and Francisco Varela, whom Capra and Luisi discuss in detail, citing the former pair's concept of autopoiesis (self-production) for their definition of life. Compiling evidence for the irreducible character of systems, *The Systems View of Life* offers a self-conscious alternative to "mainstream reductionism" that will no doubt sound familiar to many critics oriented to ecological questions or to the new materialism.

One weakness (and occasional strength) of the book is its effort at historical thoroughness, which often leads to sweeping claims such as this one from the first sentence of the introduction: "questions about the origin, nature, and meaning of life are as old as humanity itself" (1). Capra and Luisi often stretch the definition of systems thinking well beyond its twentieth-century core, pulling in ancient mystical traditions and indigenous traditions as precursors. In this respect, the effort to adduce every analogy to systems thinking is perhaps unnecessary and makes the text less convincing. A nuanced approach to history is not part of the genre expectation for a textbook, but the effort to include every example at times makes the book seem *too* unifying: it takes on the overtones of a grand narrative.

The authors also miss an opportunity to build bridges between Enlightenment philosophy and systems thinking by noting the similarities between Maturana and Varela's concept of autopoiesis and concepts of circular self-production in Kant and Hegel. Even so, the historical thoroughness of the text leads Capra and Luisi to adduce Marx's dialectical materialism as

relevant to systems thinking. They also address the Bolshevik Alexander Bogdanov's "tektological" theory of organization, which is more directly connected to cybernetics than Marx's work. Bogdanov was a cybernetic thinker *avant la lettre* who anticipated Norbert Wiener's concept of feedback and made "the first attempt to arrive at a systematic formulation of the principles of organization in living and nonliving systems" (84). The references to Bogdanov and Marx could be useful for addressing the common misimpression that systems thinking is reducible either to a mystical product of the 60s counterculture or to cold technocratic efforts to build a scientific theory of society, with its roots in the military industrial complex that emerged from the Second World War. The historical and political contexts from which it emerged are much more diverse.

Other limitations of *The Systems View of Life* are more conceptual and more pressing: the first is the reliance on the metaphysical distinction between part and whole and the second is the tendency to avoid the epistemological implications of systems thinking. The language of part and whole appears throughout the text to characterize emergence, which places Capra and Luisi's approach squarely in the tradition of organicism (a tradition which they own explicitly in chapter four, "From the Parts of the Whole"). The association of this tradition with conservative thought and social Darwinism (as in the case of Herbert Spencer) will be a problem for many readers, though the authors do not mention this dimension of the late-nineteenth and early-twentieth-century organic analogy. The association of systems theory and organicism performs the problem that critics such as Timothy Morton have pointed out, treating systems theory as unworkably neo-organicist. All systems begin to resemble the life-like organic wholes of romantic nature philosophy. The logic of part and whole is one understandable reason why many scientists and critics reject systems theory, which in its organicist mode begins to look like a reactionary approach to our fragmentary, viral ecosocieties.

One way around these objections is the second-order systems theory of Heinz von Foerster and Niklas Luhmann, but this is the path not taken by Capra and Luisi. The textbook addresses Luhmann briefly in a section on social autopoiesis. What both of these theorists add in their readings of first-order cybernetics is a collection of concepts that no longer requires the distinction between part and whole. In *Social Systems*, Luhmann makes a point relevant to the conceptualization of all self-organizing systems: the part/whole distinction can be replaced by that between system and environment; what was the whole becomes simply a system in the environment of a subsystem. This "second-order" approach addresses some of the metaphysical holdovers that could repel some readers from Capra and Luisi's primer. The same approach also brings into play some of the epistemological problems that attend to self-referential systems (for example, that we observe self-referential systems *as* self-referential systems when we are systems thinkers), but which are absent from the text.

Why does systems thinking matter for ecocritics? Most will be aware of the importance of systems concepts and organicism in the history of ecology; Capra and Luisi's book offers a strong general introduction to almost every relevant body of thought and empirical research, along with references for further reading. In this sense, it's a valuable resource. Even more, systems thinking appears to be one of very few methods of interpreting the world that does not have some form of nature-culture distinction or anthropocentrism built into it from the outset. For those who are interested in learning how systems theories play out in cultural criticism, recent work by several American critics applies systems thinking literature and other media. For example, Cary Wolfe in *What is Posthumanism?*, Bruce Clarke in *Neocybernetics and Narrative*,

Kate Marshall in *Corridor: Media Architectures in American Fiction*, and Bernhard Siegert in *Cultural Techniques: Grids, Filters, Doors, and Other Articulations of the Read* all use the work of Luhmann and other systems thinkers important for Capra and Luisi. Clarke's book contains a chapter about the influence of cybernetics on American ecology. In *Re-Making Gender* (forthcoming), Judith Roof develops a systems theory of gender using Luhmann and Lacan. Other examples could also be cited that show a recent growth of interest in the tradition summarized by Capra and Luisi.

Finally, systems thinking has the potential to influence how critics conceptualize scientism and naturalization, and thus how they relate to claims made by the natural sciences. *The Systems View of Life* is one of a whole swathe of texts, from the new materialism in cultural theory to speculative realism and new naturalism in philosophy, that now argue for an anti-reductive naturalism of the kind laid out by Capra and Luisi. Where naturalism has in the past been associated with reductionism and the *loss* of something distinct, such as mind, that science boils down to matter, the irreductionist naturalisms tend to leave such somethings intact as emergent properties, fully natural and material yet unexplainable in terms of the bottom level of reality. Where naturalism has been affiliated with naturalization, in the sense familiar to critical theory, of social and historical constructs, the new naturalism would embrace these categories without taking away their contingency. Much in biology can never be destiny because biological systems rarely work in the mode of strict determinism, as when one gene always produces the same characteristic, in every environment. This means that the ability of biology to do the ideological work it has done in racial and sexual determinisms is no longer available, not because the social replaces what had been naturalized, but because biology now looks very different from the way it looked in the heyday of gene centrism. One useful aspect of Capra and Luisi's approach to life, then, is that it allows biology to converse with concepts that the old naturalism might have reserved for the social and for the free human subject.

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***Material Ecocriticism*. Ed. Serenella Iovino and Serpil Oppermann. Bloomington: Indiana UP, 2014. 359 pp. Paper \$40.00.**

The discovery of the paradigmatic-syntagmatic dichotomy that governs the realities of language in semiology was paradoxically the by-product of Roman Jakobson's analysis of aphasic syndromes. *Material Ecocriticism*, in a similar way, alters and challenges the basic assumptions of modern linguistics and post-structuralism that privilege human agency by pointedly observing the inability to think matter as a body of agency and construct "material narratives" around it (6). *Material Ecocriticism* is an anthology of collective efforts by new materialist thinkers who attempt to fill in "the chasm between the human and the nonhuman world" (2) by making visible the trans-corporeality of the world where "humans and nonhumans are 'carnally immersed'" and "meaning and matter are inextricably entangled, constituting life's narratives and life itself" (5).

The five essays in “Part 1. Theories and Relations” galvanize an interactive conversation that calls for rethinking matter in ontological, ethical, and epistemic terms. Serpil Oppermann aligns new materialism with the postmodern critique of the “modernist legacy of subject-object splits” (22), highlighting the “ontological performance” (30) of matter in the “meaning-producing embodiments of the world” (29). Hannes Bergthaller, meanwhile, pointedly notes that the “agency of matter” does not offer explicit “ethical guidance,” but finds a viable model in the theory of autopoiesis – “a system that (re)produces itself” on the basis of its relation to its environment (43). Wendy Wheeler’s essay on biosemiotics invokes Jakobson’s linguistic model, but further points toward “metonymy’s metaphoric potential” (75), which results in the revision of Jakobsonian structuralism into an “evolution of structuration” (76). Heather I. Sullivan explores the realm of “(ecological) posthumanism” (82) by reading Johann Wolfgang Goethe’s *Theory of Color* (1810) as a “material-based ‘nature writing’” (87) that considers “human beings and bodies *in terms* of their relations, intra-actions, or coproduction” (90).

The four essays in “Part 2. Narratives of Matter” can be read as the praxis of material ecocriticism that ranges from Serenella Iovino’s reading of the city of Naples as “a porous city,” where matter becomes memory amidst the landscape of ruins fraught with human and nonhuman bodies that serve as a witness to the “violently inhumane” atrocities inflicted by “a volcanic eruption, a virus, a falling asteroid, war, and even politics” (106); to Lowell Duckert’s description of the agency of rain as the embodiment of “pure immanence, affect . . . [and] life” (115) that obliterates the demarcations between “climate and culture, life and matter, and subject and object” and indicates “a better ontological humility” (116); to Simon C. Estok’s study in pain and ecophobia in tragedy, which lead to the demythologizing of humanity and the acknowledgement of nonhuman agency.

“Part 3. Politics of Matter” brings material ecocriticism to the core of contemporary biopolitics and environmental issues. Catriona Sandilands intensifies the discourse of biopolitics by magnifying the “response-ability” of bees, which pushes the limit of “ontological equality” (159). The environmental history of human waste and the colonial, racial, and environmental politics surrounding it become the focus of Dana Phillips’s critique of the global sanitary crisis. Proposing trans-corporeality as an efficient way of addressing marine life environmental issues, Stacy Alaimo urges the reader to recognize “ontological entanglements” (195) and the implications of “material intra-actions” (191) in a broader context of the “risk society” that Ulrich Beck has well defined. Comparing cornfields and restored tallgrass prairie in Wisconsin to disabled bodies, El Clare ponders the meaning of being abnormal or unnatural and the biopolitical implications of “restoration.”

“Part 4. Poetics of Matter” foregrounds the creative force of matter in the making of a world. Cheryll Glotfelty’s reading of the photographer Peter Goin’s *Nuclear Landscapes* reveals the postapocalyptic sites of radioactivity that become the matrix of Goin’s “deaestheticized,” spectral world of photographs (225). Wary of “romanticization of . . . premodern cultures” (259), Joni Adamson investigates Amazonian cosmologies of oral traditions and “multinatural cosmos” (265), adopting Bruno Latour’s “dis-anthropocentric strategy” (266). Timothy Morton contemplates how an art work embodies “the liminal space(s) between things” (270) and “the gathering of coexistent beings” (271) and captures the moment of “epiphany” at which a reality springs forth amidst nothing, signaling the singularity of a being.

The two essays in “Coda. Open Closure” attempt to bridge spirituality and matter in a postsecular world by discussing Australian aboriginal narratives and Buddhist philosophy by way of promoting ethical and spiritual practices of new materialisms. Building on the discourse of narrative studies, poststructuralism, and the ethico-ontological speculation of existential philosophy and phenomenology, *Material Ecocriticism* pushes the idea of the agency of matter as far as it could and offers an excellent guide to the most recent scholarship of the material turn that prompts the reader to consider all living bodies connected with one another in an ecosystem.

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¹To further contextualize Seymour’s ideas on reproductive futurism, an interesting and relevant (for this review) article, “Klein vs Klein”, that speaks to the way reproductive futurism operates in Klein’s latest book *This Changes Everything* (2014) can be found at the blogging website *Out of the Woods*: <https://libcom.org/blog/klein-vs-klein-09012015>.