theories and methodologies

Beyond Imagining, Imagining Beyond

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PARTICULARLY BECAUSE THE MLA LACKS A DIVISION ON ENVIRONMENTAL LITERATURE, IT IS GRATIFYING THAT THE ORGANIZATION IS turning attention to environmental studies through forums such as this one. Many more in the profession than the fourteen hundred members of the Association for Study of Literature and the Environment take some interest in environmental literature and would like to foster sustainability through their teaching or research. Yet the term is problematic: a popular buzzword, its parameters are vague, and consequently the more difficult questions underlying the concept are too easily evaded. Sustainability of what and for whom? we might ask. Are people talking about sustaining complicated, interwoven biotic communities, sustaining humankind, or sustaining a comfortable lifestyle currently enjoyed by the privileged classes around the globe? What are the term's qualitative implications? What constitute appropriate standards for sustainability, and who decides? What political and economic policies will be necessary? Where will we get the motivation, the will to institute them? Where does sustainability intersect with issues of environmental and social justice, and how will we address the many ethical questions it raises?

Sustainability is everywhere these days. It's such a popular and readily diluted notion that the *New York Times*'s Week in Review section, using an image that played on the standard recycling logo, ushered in 2011 with "A Sustainable Life," a feature in four categories: love, money, food, and technology. Unsurprisingly, articles under only two headings responded to environmental issues, and in terms of sustainability their recommendations were ludicrously slight: more recycling in the manufacture of cell phones; more home cooking, preferably vegetarian; and, with a touch of mockery, eating invasive species. Taking the concept more seriously as relating to what the EPA, drawing on the 1970 National Environmental Policy Act, defines as "the creation and maintenance of conditions under which humans and nature 'can exist in productive harmony, and fulfill the social, economic and other requirements of *present and future generations*,'"

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most colleges and universities by now have some kind of sustainability initiative in progress ("Sustainability"). These initiatives, which produce recommendations or policy guidelines for green building on campus, recycling and reuse of materials, integration of local food into the campus food service, greater reliance on mass transit, and so on, are valuable, and it's good to see such widespread consensus on their worth. As the environmental historian William Cronon has observed, where the term *environmentalism* acquired repellent associations of elitism as well as gloom, this term that has taken hold in the twenty-first century has the appeal of suggesting the hopeful possibility of effective action ("Riddle").

However, the readiness with which businesses throughout the United States and Europe are embracing sustainability makes clear that in popular discourse sustainability is understood as fitting within the established patterns of capitalist consumption; businesses thrive as they persuade homeowners to invest, for instance, in more energy-efficient or water-saving versions of their household appliances. The existence of multiple green-gadget Web sites demonstrates that products marketed as reducing or minimizing environmental damage are big business. The popularized idea of sustainability seems to involve attaining at less environmental cost (according to some unspecified calculation) a version of the status quo—or a lifestyle even more dependent on constantly "improved" consumer products. Apparently wishing to assure United States citizens that sustainability need not disrupt business as usual, the EPA notes on its Web site that "[c]ommon to both public policy and business perspectives [on sustainability] is recognition of the need to support a growing economy while reducing the social and economic costs of economic growth" ("Sustainability"). But what about environmental perspectives? If the world we want to sustain is one in which climate change is held enough in check that coastal cities like New York remain above water, in which widespread famines and worldwide shortages of potable water are avoided, principles of economic viability will have to replace goals of continuous economic growth. It's hardly news that to preserve the biosphere in something like its current state for future generations, we will have to drastically reduce the amount we in the industrialized and developing nations consume. Sustainability doesn't mean simply masses of individuals replacing incandescent bulbs with compact fluorescents and carrying to the grocery store reusable bags made from recycled materials. Environmentally sustainable living will require far more substantial changes for individuals, institutions, and infrastructures.

Determining what constitutes genuine sustainability poses on one level a set of scientific problems. In addition to providing analysis and predictions, biologists and engineers are being called on to develop solutions that will counter some of the negative effects of current or past practices. Some of these suggest approaches to sustainability so enamored with technological ingenuity that they fail to take into account the complex interdependencies of ecosystems. Since 2009, for instance, Harvard scientists have been working on a National Science Foundation–funded project to create a coordinated colony of robotic bees. In addition to their military and high-tech uses, these tiny machines could serve as pollinators to compensate for the rapid decline in the honeybee population ("Robobees"; Welsh). One-third of the food we eat comes from crops that require pollination, most often provided by bees; their numbers are being decimated by colony collapse disorder, thought to be caused by a combination of factors, in which the agricultural use of pesticides and the trucking of bees around the continent to fertilize monoculture crops figure prominently ("Colony Collapse Disorder"; Suryanarayanan and Kleinman). Robotic replacement of one function of a single species may be the

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National Science Foundation's idea of a possible means to sustainable food production, but it clearly does not reflect the kind of thinking in terms of interconnectedness that Timothy Morton has named "the ecological thought."

Of course, many physical scientists possess a nuanced ecological understanding, and the scientific community appears to possess the technological know-how to make changes to, for instance, the quantity of greenhouse gas emissions—changes that could ensure long-term sustainability of human life and of the life of a large percentage of the bioforms still surviving in what biologists identify as the sixth great extinction. Scientists can produce definitions of sustainability, along with procedures for attaining at least some aspects of that goal. For good or ill, however, decisions about such questions as how much to reduce greenhouse gas emissions around the globe and in what time frame ultimately are not scientific decisions; sustainability is an interdisciplinary as well as a cross-cultural conundrum, and, for the most part, technological feasibility is less at issue than economic, political, social, and psychological feasibility or commitment.

We in the arts and humanities produce little data on sustainability and have little direct impact on relevant public policy. Nonetheless, our contributions—indeed, our responsibilities—are crucial ones. If popular ideas of sustainability are to be reclaimed from the blurry, feel-good realm of corporate advertising and given meaningful, hard edges, if we are to attain a sustainability that is ethical and just in relation to the human population of the planet, not to mention the vast nonhuman populations, and if we are to move mindfully toward a genuinely desirable future, the arts and the human imagination deployed by the arts have significant roles to play. We whose profession requires acute sensitivity to language can call attention to imprecision and deceit in uses of language surrounding sustainability and can dramatize the attendant risks; we can act as translators and bridge builders among the divergent disciplines that must interact to develop systems of sustainability. The arts can influence people through emotionally and intellectually compelling exposures of present conditions and of the material and ethical implications of traditional assumptions and current practices. Critics and practitioners of the verbal arts can also investigate how language, which shapes human thought, may itself be renovated to foster more sustainable relations to the planet and its inhabitants.

Nature writing as it has developed from traditions of the pastoral contributes valuably to readers' appreciation of the given world and can instill reverence or respect that prompts a desire to preserve the earth's resources, yet this genre may play a relatively minor role in the conversation around sustainability. Received ideas of nature codified in such writing tend, as many have noted, to position nature as something apart from the human, making it difficult to conceptualize ways for large populations to live appropriately in and with nature (e.g., Williams; Cronon, "Trouble"). The elegiac or nostalgic cast of much nature writing is likely to be of little use to clearheaded envisioning of an attainable, sustainable future.

Environmental apocalyptic writing, another favorite genre among ecocritics, similarly makes a valuable but limited contribution: such works render vividly the hellish places to which we seem headed, again providing motivation to commit to necessary societal and individual change. Margaret Atwood's "speculative fiction" *Oryx and Crake* is one such work, its apocalypse triggered by an act of genetically engineered bioterrorism in response to the exhaustion of planetary resources and the consequent degradation of human life. Yet the ways in which the novel goes beyond the apocalyptic may best exemplify how literature can keep us on track toward genuine sustainability: Atwood

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emphasizes how issues of environmental justice (the social inequities whereby oppressed and impoverished people suffer disproportionately the consequences of environmental degradation) set the stage for her near-future apocalypse, and she gives fictional embodiment to one vision of an ideal humankind and an ideal future—a vision compelling in some ways and horrifying in others. Careful attention to global human and interspecies issues of environmental justice or ethics and serious imaginative exploration of what constitutes a desirable future are among the crucial obligations of what we might think of as literature not *of* but *pointing toward* sustainability.

Because the intellect strains to grasp the nature and the vast consequences of the changes humans are making to the planet, we inhabitants of the Anthropocene epoch need artworks that help us think about what is almost unimaginable: works that attain a large-scale perspective on the actual conditions of our degraded and radically, though perhaps unspectacularly, altered environment. Morton has given the name "hyperobjects" to materials of unfathomable duration such as plutonium and Styrofoam that have been produced by humans only in recent decades, substances that are being absorbed into our bodies and yet are "beyond the normal scope of our comprehension" (*Ecological Thought* 131). "Hyperobjects stretch our ideas of time and space, since they far outlast most human time scales, or they're massively distributed in terrestrial space and so are unavailable to immediate experience" ("Hyperobjects"). Pointing out that "alongside global warming, 'hyperobjects' will be our lasting legacy," Morton asserts that "the ecological thought must think the future of these objects" (*Ecological Thought* 130), a future that extends tens of thousands of years or more. Ten thousand years is inconsequential in a geologic context, yet almost beyond imagining for the human individual, whose life span is unlikely to exceed a century. Even so, any realistic plan for sustainability has to take into account these hyperobjects, just as it will have to look hard to discern the often invisible damaging processes that Rob Nixon explores in his superb study *Slow Violence and the Environmentalism of the Poor*. One of Nixon's premises is that the "slow violence" of "delayed destruction that is dispersed across time and space" (2)—associated, for instance, with war's toxic aftermath or climate change—poses a representational challenge: "how can we convert into image and narrative the disasters that are slow moving and long in the making, disasters that are anonymous and that star nobody, disasters that are attritional and of indifferent interest to the sensation-driven technologies of our image-world?" (3). Focused on prose works by writer-activists, his response to that question emphasizes narrative and plotting as crucial means for giving dramatic urgency to amorphous threats dispersed across time and space.

Without downplaying the importance of storytelling for creating the scripts by which we live into the future, as a scholar of contemporary poetry interested in more experimental writing—and on this occasion invited to consider an even broader range of issues than the many forms of slow violence of concern to Nixon in his book—I offer a somewhat different perspective. I believe the demanding projects that must be undertaken by a literature toward sustainability will require the literary and imaginative equivalent of biodiversity: different contributions will come from a variety of generic, formal, structural, rhetorical, and thematic approaches, many of them deliberately resisting inherited conventions, and from varied critical and social perspectives. Independently and in interaction with one another, the diverse species in this literary ecology may open up our perceptions and with them our understanding of our options.

From my disciplinary niche, I see in kinds of poetry that avoid or complicate narrative teleologies valuable resources for ap-

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proaching the problematics of sustainability. I'll therefore introduce briefly a few examples of recent work by more or less experimental North American poets whom I regard as writing toward sustainability. Their contributions differ from those of narrative writers, who give startling visibility to easily overlooked crises or bring to life fully envisioned futures following from current practices. Through a focus on expanding the resources and pushing the limits of language itself, these poets work to generate the kind of intellectual and imaginative equipment that can help us move toward futures less bound to the modes of thinking and being that have produced the mess in which we find ourselves. The four I mention represent a larger number who resist habituated ways of thinking and of ordering perception and language in their attempts to produce a more complex understanding of the present and a more flexible sense of possible futures (many of these poets appear in the journal *Ecopoetics*; see also Iijima).

Since the early 1970s the African American poet Ed Roberson has been publishing nature poetry as attentive to urban nature and urban spaces as to the remote wilderness areas where he also has worked and traveled. The cover image for his 2010 volume *To See the Earth before the End of the World* looks initially like a close-up of a shelf fungus or some digitized distortion of a peacock's fantail, but closer inspection reveals that the material depicted is liquid and the object much larger: the photo captures from above the effluvium of an outlet pipe (visible as a tiny form at the bottom) from a Florida phosphate-waste impoundment. In keeping with this disorienting and disturbingly beautiful image, Roberson's book is particularly valuable for its thinking about scale and its conveying in verbal images the difficulties of grasping the place of the human; humankind occupies a minute speck of geologic time and of intergalactic space, at the same time that "consequence is our print and finger paint / and what we do doesn't disappear / from what is done" (55). Some shifts of perceived scale in these poems reveal the world's expansive glory, as in the apprehension of a child who, as he looks through elms hoping to catch sight of the cicadas he can hear, observes a spectacular sunset:

> He thinks this is how cicadas' sound
> speakers look hooked up to the sky
> through the trees refractive, light show
> to the music & this evening is their show
> the cataclysmic novas nebulae (8)

Other representations of scale shifting are more somber, as global warming alters our apprehension of time:

> Media note *people chasing glaciers*
> in retreat up their valleys and *the speed . . .*
>
> watched ice was speed made invisible,
> now— it's days, and a few feet farther away,
> a subtle collapse of time between large
>
> and our small human extinction.
> (3; ellipsis in orig.)

Roberson is explicit that large-scale perspectives will not protect us from error—"we'll trip over the mirage as easily / a distance as over something here in this dark" (29). Yet perception in terms of larger wholes emerges as the vantage for a clearer sense of the biological limits, individual and collective, within which ethical choices can be made.

Given that sustaining human life will require understanding our interdependencies with the other species with whom we share habitat, it's appropriate to approach the first book of the Canadian writer and performance artist Angela Rawlings (who publishes as a. rawlings), *Wide Slumber for Lepidopterists*, as a work that thinks toward sustainability. Rawlings uses varied modes of thematic, visual, aural, phonemic, and formal metamorphosis to generate a strikingly unstable text that recasts relations between human

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and nonhuman animals, specifically lepidoptera. Structured according to the stages of the lepidopteran life cycle, which are linked with stages of sleep and sleep disorders of *Homo sapiens*, the text frequently unsettles conventional distinctions between species by emphasizing somatic experiences the species share. In the following passage, for instance, the pronoun *we* becomes interspecial as it draws readers into an experience that seems both the human progress toward orgasm's "sweet hot full the electricity" and the compound-eyed moths' effortful emergence from an earlier stage of itself, the pupa:

> we are taut while we thrust against the inner wall. Sleep is bruised or screams or none comes but we desire, we feel the full hot flesh of our wing swipe grass, scrape sand, we push ourselves out of ourselves, into our sound our hand our sweet wet hot our path, mourn, rake, master or muster. Glisten swell come and the story's arousal, twenty eyes unblink when the sun's awake and even when it's not the brain speaks, screams, swells
>
> and huge battened eyes of a hundred hungry mouths, no moths, wait this will move. (16–17)

At the same time, the text's emphasis on linguistic mediation maintains the reader's awareness that the ability of humans to know or represent nonhuman experience is limited. In combination, these tendencies encourage a compassionate recognition of both connection and alterity important to planning for sustainability.

Confronting "the common.experience" (of the digital era, the punctuation suggests) "to bear / moreandmorewitness.to" the transformation of the global environment by plastics (63), Evelyn Reilly in *Styrofoam* takes on the terrifyingly vast scale and impact of nonbiodegradable, petroleum-based hyperobjects. A chemical drawing of the polystyrene (Styrofoam) molecule precedes the first poem, "Hence Mystical Cosmetic over Sunset Landfill," which begins, "Answer: Styrofoam deathlessness / Question: How long does it take?" (9). In the volume's collagistic, semidocumentary mode, allusions to such works as Samuel Taylor Coleridge's "The Rhyme of the Ancient Mariner," Herman Melville's "The Whiteness of the Whale" (the source of "mystical cosmetic"), and D. H. Lawrence's "The Ship of Death" underscore a message of horror and doom in the text's largely nonemotive presentation of chemical formulas for plastics, diagrams of the characteristics of polystyrene materials, lists of families of thermoplastics, excerpts from studies on the medical effects of food-contact polystyrene, names of endangered hummingbird species, and the like. While we all know that plastics are everywhere and often leak toxins, it takes this kind of gathering of material to strip away the veil of familiarity enough for us to absorb the impact of the plasticization of our world in terms of human health, animal survival, climate change, and the accumulation on land, in the oceans, and in our bodies of ineradicable toxic waste. Such writing aims at a deliberate "*dis-enchant[ment]*" that frees readers from "the mesmerizing spell of the transcendent." By enforcing a perspective in which the human is decentered as "the self dissolves into the gene pool and the species into the ecosystem," it orients us toward more sustainable choices ("Eco-Noise" 257).

Ursula Heise has usefully called for a shift of cultural imagination in environmentalist thinking "from a sense of place to a less territorial and more systemic sense of planet" (56). Thinking toward sustainability similarly requires that local practices be reconceptualized within planetary dynamics. Juliana Spahr's *Well Then There Now* enacts much of what Heise advocates: each of its eight sections is tied to a place and introduced with a map on which the place is marked, its latitude and longitude recorded, yet the emphasis is on global connectedness. Thus, in "Unnamed Dragonfly Species," which was composed in Brooklyn, alphabetically arranged names of

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threatened or endangered wildlife species in New York State appear between sentences of a narrative in which a "they" who "had never even been near Antarctica" (76) obsessively replay an Internet animation made from satellite photographs recording the separation from the Antarctic Peninsula of a piece of the rapidly melting Pine Island Glacier: "glaciers were not near them but they obsessed them" (88). In a world threatened by global environmental catastrophes and bound by digital media, one's orientation is necessarily, in Heise's terminology, cosmopolitan.

From such an "eco-cosmopolitan" stance (Heise), Spahr explores the interactions of nature and culture—or, rather, multiple cultures. Sometimes she enacts cultural interplay procedurally by putting her drafts through translation machines using several languages so that they modify her English. She draws heavily on her experiences as an outsider relocated to Hawai'i in depicting how the social and environmental flux in the postcolonial or neocolonial world results from entanglement with economic, cultural, and ecological conditions elsewhere:

> We tried not to notice but as we arrived we
> became a part of arriving and making
> different.
> We grew into it but with complicities and
> assumptions and languages
> and kiawe and koa haole and mongooses
> [problematic introduced species].
> With these things we kicked out certain other
> things whether we meant to or not.
>
> Asking what this means matters.
> And the answer also matters. (19)

Humans appear to be the only species with the ability to think—or care—about the planetary future; clearly, works of literature can raise questions that matter to that future. My hope is that they can do so in ways sufficiently compelling to push us—as members of local, bioregional, national, and transnational communities—to turn to one another and ask, with rigor and seriousness, What must we do to sustain the life-forms on this planet, and how do we begin that process today?

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