Teaching Ecocriticism and Green Cultural Studies

GREG GARRARD

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Also by Greg Garrard

ECOCRITICISM

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Hayden Gabriel is the author of *The Quickening Ground* (2002) and *A Wonderful Use for Fire* (2004), works of fiction that engage with environmental awareness and concern. She is Programme Leader for Creative Writing at University College Plymouth.

Greg Garrard is a National Teaching Fellow of the Higher Education Academy and a senior lecturer in English literature at Bath Spa University, where he teaches poetry, contemporary literature, ecocriticism and animal studies. He is Chair of the Association for the Study of Literature and Environment (UK and Ireland) and the author of *Ecocriticism* (2004), as well as numerous essays on literature and the environment and ecocritical pedagogy. Currently he is editing the *Oxford Handbook of Ecocriticism*.

Elizabeth Giddens is Associate Professor of English at Kennesaw State University in Georgia, where she teaches in the master of arts in professional writing and the American Studies programmes. Recent articles include 'Creating a Rhetorical Space for Biodiversity: The Great Smoky Mountains Association' in *Rhetorics, Literacies, and Narratives of Sustainability* (2009) and 'Saving the Next Tree: The Georgia Hemlock Project, Community Action, and Environmental Literacy', *Community Literacy Journal* (2009).

Ursula K. Heise is Professor of English, Director of the Program in Modern Thought & Literature at Stanford University and 2011

President of the Association for the Study of Literature & Environment (ASLE). She is the author of *Chronoschisms: Time, Narrative, and Postmodernism* (1997), *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* (2008) and *Nach der Natur: Das Artensterben und die moderne Kultur* (After Nature: Species Extinction and Modern Culture; 2010). She is also working on a book provisionally entitled *The Avantgarde and the Forms of Nature*.

Kevin Hutchings is Professor of English and Canada Research Chair in Literature, Culture and Environmental Studies at the University of Northern British Columbia. His books include *Romantic Ecologies and Colonial Cultures in the British Atlantic World 1770–1850* (2009) and *Imagining Nature: Blake's Environmental Poetics* (2002).

Adrian Ivakhiv is Associate Professor of Environmental Studies at the Rubenstein School of Environment and Natural Resources, University of Vermont, where he coordinates the graduate concentration in environmental thought and culture. He is the author of *Claiming Sacred Ground: Pilgrims and Politics at Glastonbury and Sedona* (2001) and *Ecologies of the Moving Image: Cinema, Affect, Nature* (forthcoming).

Erin James is an assistant professor of English at the University of Nevada, Reno. She is co-editor of *What is the Earthly Paradise?: Ecocritical Responses to the Caribbean* (published under her maiden name, Erin Somerville, 2007) and her forthcoming book examines the role of narrative forms in encouraging ecological awareness.

Scottie Kapel is currently a graduate student in archives, preservation and records management at the University of Pittsburgh. She received her bachelor of arts in English from the University of North Florida. Her academic interests include animal studies and environmental literature, specifically early American representations of the sea.

Richard Kerridge is Research Coordinator at the Humanities Faculty at Bath Spa University, inaugural Chair of ASLE-UKI and the only European elected to the ASLE Executive Council. He edited the first British collection of ecocritical essays, *Writing the Environment* (1998),

and has twice received the BBC Wildlife Award for nature writing. He is the author of numerous essays on ecocriticism and his book *Beginning Ecocriticism* is forthcoming.

Anthony Lioi is an assistant professor of liberal arts and English at the Juilliard School in New York City, where he teaches writing, American literature and the environmental humanities. His work has appeared in *Interdisciplinary Studies in Literature and the Environment*, *Feminist Studies*, *MELUS* and a number of ecocritical anthologies.

Timothy Morton is Professor of English (Literature and the Environment) at the University of California, Davis. He is the author of *The Ecological Thought* (2010), *Ecology without Nature* (2007), seven other books and more than 70 essays on philosophy, ecology, literature, food and music. He blogs regularly at http://www.ecologywithoutnature.blogspot.com.

Bart H. Welling, an associate professor of English and an Environmental Center Fellow, has been teaching classes in ecocriticism and animal studies at the University of North Florida (Jacksonville) since 2003. His forthcoming work includes essays on animals in religion, anthropomorphism in animal photography and bioregionalism in the US South.

Louise Westling is Professor of English and Environmental Studies at the University of Oregon. Her books include *Sacred Groves and Ravaged Gardens: The Fiction of Eudora Welty, Carson McCullers and Flannery O'Connor* (1985), *The Green Breast of the New World: Landscape, Gender, and American Literature* (1996) and a new study of Merleau-Ponty, animal studies and language.

Chronology

Timeline

1854 Henry David Thoreau, *Walden, or Life in the Woods*.
1864 George Perkins Marsh, *Man and Nature* (later reissued as *The Earth as Modified by Human Action*).
1866 Ernst Haeckel coins the term 'ecology' ('œcology').
1962 Rachel Carson, *Silent Spring*.
1964 Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America*.
1970 First Earth Day in the USA.
1972 The Club of Rome, *The Limits to Growth*.
1973 Raymond Williams, *The Country and the City*.
Endangered Species Act in the USA.
Chipko Movement in Northern India to protect trees from commercial logging.
1974 Joseph Meeker, *The Comedy of Survival: Studies in Literary Ecology*.
1978 Exposure of the Love Canal toxic waste dump near Niagara Falls.
1983 German Green Party wins 27 seats in West German Federal Parliament (*Bundestag*).
1984 Toxic gas leak at the Union Carbide plant in Bhopal, India.
1986 Explosion at the Chernobyl nuclear power station in the Soviet Union.
1987 The Brundtland Commission, *Our Common Future*.
1988 Murder of union organiser and environmentalist Chico Mendes by Brazilian cattle ranchers.
The Mauna Loa observatory records a global mean concentration of CO_2 in the atmosphere of more than 350 parts per million (ppm). Many campaigners consider this the maximum 'safe' limit. The figure in 1959 was 315.98 ppm. The level in 2010 was 389.78 ppm, a figure that does not include other greenhouse gases, such as methane.

1989 First Montreal Protocol on Substances that Deplete the Ozone Layer.
Exxon Valdez oil spill in Prince William Sound, Alaska.

1991 Jonathan Bate, *Romantic Ecology: Wordsworth and the Environmental Tradition.*

1992 United Nations Conference on Environment and Development, or 'Rio Earth Summit', initiates Convention on Biological Diversity and 'Kyoto' process to address climate change.
Founding of the Association for the Study of Literature and Environment at a session of the Western Literature Association in Reno, Nevada. ASLE now has branches and affiliates in Canada, the UK and Ireland, mainland Europe, Japan, Korea and Taiwan.
Alexander Wilson, *The Cultures of Nature: North American Landscape from Disney to the Exxon Valdez.*

1995 Execution of Ken Saro-Wiwa, Nigerian environmental campaigner.
Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture.*
Patrick D. Murphy, *Literature, Nature, and Other: Ecofeminist Critiques.*

1996 Cheryll Glotfelty and Harold Fromm (eds), *The Ecocriticism Reader: Landmarks in Literary Ecology.*
Louise Westling, *The Green Breast of the New World: Landscape, Gender and American Fiction.*

1999 Global human population exceeds 6 billion.

2001 Karla Armbruster and Kathleen Wallace (eds), *Beyond Nature Writing: Expanding the Boundaries of Ecocriticism.*

2002 Joni Adamson, Mei Mei Evans and Rachel Stein (eds), *The Environmental Justice Reader: Politics, Poetics, and Pedagogy.*

2003 Completion of the Three Gorges Dam on the Yangtze River.
Dana Phillips, *The Truth of Ecology: Nature, Culture, and Literature in America.*
Rob Nixon, 'Environmentalism and Postcolonialism'.

2004 *The Day After Tomorrow* (dir. Roland Emmerich).

2006 *An Inconvenient Truth* (dir. Davis Guggenheim).
The Baiji, or Yangtze River dolphin, declared 'functionally extinct'; the first marine mammal extinction since the 1950s.

2008 *Wall·E* (dir. Andrew Stanton).
2009 United Nations Climate Change Conference (COP-15 Summit) collapses.
2010 Timothy Morton, *The Ecological Thought*.
United Nations Convention on Biological Diversity agreed in Nagoya, Japan.
2011 Global human population exceeds 7 billion.

1
Introduction

Greg Garrard

Ecocriticism has been preoccupied with pedagogy since its inception. Teaching undergraduates environmental theories and literatures is the central kind of 'activism' to which busy humanities academics can aspire, and arguably the most effective too; and furthermore, with a few prominent exceptions, ecocriticism in the USA and the UK began in 'teaching-led' universities and colleges, and has historically found little favour in the research-focused 'elite'. *Interdisciplinary Studies in Literature and the Environment*, the *primus inter pares* of ecocriticism journals, initially maintained a regular pedagogical section as part of its mix of scholarly articles, creative writing and narrative scholarship, and the first anthology of ecocritical material was Frederick Waage's *Teaching Environmental Literature: Materials, Methods, Resources* (Modern Language Association 1985). As Waage's selection indicated, the approaches to teaching endorsed by what Lawrence Buell has called 'first-wave' ecocritics were predominantly place-based, emphasising the role of direct experience of nature combined with close reading of American nature writing (Buell 2005, pp. 17–28). Ideally, the real location of learning would be concentric with the one described in the text. Thus Nebraska encircled Hal Crimmel's student readers of Willa Cather's *My Ántonia* much as Dublin might environ (while extending far beyond) the *Ulysses* enthusiast retracing the footsteps of Harold Bloom (Crimmel 2003). Although the geographical, thematic and ethnic reach of the sequel to Waage's book, *Teaching North American Environmental Literature* (Christensen et al. 2008), was much extended, pedagogical

approaches linked to locales, with frequent use of field trips and service learning, remained dominant.

I have given a more detailed account of 'first' and 'second' wave ecocritical pedagogy elsewhere (Garrard 2010), together with some proposals for bringing greater empirical grounding to the field. But one of the most important strands in ecocritical pedagogy is also, as Greta Gaard has pointed out, the least susceptible to Buell's periodisation: ecofeminism (Gaard 2010). Thus in 1995, as the first wave swelled, Patrick Murphy envisaged a 'Trickster Midwife' teacher who 'teaches by story, paradox, and questioning' (p. 135), drawing together Mikhail Bakhtin's dialogism with feminist consciousness-raising. By contrast, mainstream ecocritical pedagogy tended to sound prescriptive and didactic, even if it was not in practice; its landscapes and texts were varied, but the place of students in the equation was often the same. A quarter of the essays in *Ecofeminist Literary Criticism* (1998), edited by Gaard and Murphy, address pedagogical questions, including Gaard's own essay that emphasises student-centred learning approaches in assessment and evaluation as well as classroom practice.

Precisely because they have dominated published research to date, classic place-based and ecofeminist pedagogies are not represented here. *Teaching Ecocriticism and Green Cultural Studies* includes British perspectives alongside those from North America, and is addressed to literatures and non-literary media given little or no attention in the collections already mentioned. It supplements the *concentric* vision of traditional conceptions of literature and landscape, in which local and immediate perceptions are always prioritised over mediated or global ones, with a *polycentric* one that owes much to Murphy's conception of shifting 'pivots' and 'grounds'. Digitally mediated knowledge is not considered inherently inferior to reading a novel, digging fingers into soil or stretching one's limbs '[b]eside a brook in mossy forest-dell' – all yield kinds of comprehension not available in any other way.

The overarching question for ecocritical pedagogy, addressed in Richard Kerridge's essay, concerns the relationship of ecocriticism to the identity of English literature as such, at least insofar as it was conceptualised by influential British founding fathers such as Matthew Arnold and F.R. Leavis. The predicament we currently face is complex, in that their 'humanism' has been justly critiqued both by the

previous generation of Marxist and other scholars engaged in cultural politics and, for different reasons, by 'posthumanist' advocates for non-human animals and what Val Plumwood has called 'Earth Others'. At the same time, though, the humanities require passionate advocacy in the face of renewed attack by institutional managerialism and narrow economic calculations of the 'value' of a degree. We have been here before: Terry Eagleton, writing in 1983, argued for the abolition of the institutions of 'literature', but went on to observe that:

> Since the government, as I write, seems on the point of achieving this end more quickly and effectively than I could myself, it is necessary to add that the first political priority for those who have doubts about the ideological implications of such departmental organisations is to defend them unconditionally against government assaults. (p. 213)

What was true for 'literature' then is true for the 'humanities' now. Several of these essays propose that resistance to the latest hectic and heedless initiatives could be a principled – though always partial and compromised – attention to *slowness* (slow films, slow reading, slow movement even). The only rational and sustainable response to the commodification of education, and the construction of students as 'customers', is a combination of reflexive critique, which addresses the consumption of education and 'environmental' experience just as much as soft drinks or cosmetics, with a progressive pedagogy in which the keynote of student-centred learning is *responsibility* rather than *entitlement*.

While the national and global struggles go on, though, teachers have to find the best ways to teach their classes from day to day and year to year. The specific contemporary challenges for ecocritical pedagogy can be broken down into ways of dealing with scale, coping with interdisciplinarity, and developing strategies for non-literary media. Ecocriticism is always scoping and traversing scales, as in Jeremy Hooker's idea of the close-up 'ditch vision' in British nature poetry; Ursula Heise's uses for Google Earth; negotiating the problem of representing climate change; taking the tiny steps of Timothy Morton's walking meditation; or trying to communicate an English Romantic epiphany in a harsh Northern Canadian

environment. The theoretical questions are continually clarified, and often sharpened, by the pedagogical ones. As well as addressing spatial and sometime temporal scale, ecocritics choose and are chosen by their disciplinary commitments outside literary studies, of which a representative (though not exhaustive) selection is included here. 'Interdisciplinarity' is a contemporary buzz-word, more often acclaimed than practised, with a range of hazards and opportunities well known to the authors collected here. Still more of a dark continent is the pedagogy of non-literary media, broached here by Anthony Lioi and Adrian Ivakhiv. Our students are already multimodal citizens and consumers, which makes the near-exclusive emphasis of ecocriticism upon traditional literary genres destructively self-marginalising.

Most of these essays are about what teachers of ecocriticism and green cultural studies can *do*, immediately and practically, in their classrooms. Adrienne Cassel's essay demonstrates the continued vitality of place-based learning, adapted to the exigencies of teaching in a region that has, in recent history, been impacted severely by the recession consequent upon collapsing banks and house prices. Her commitment to the practice of a social, even (whisper it) socialist ecology reflects the belief that environmentalism need not – indeed, in the long run, *must* not – be a moralising discourse founded in socio-economic privilege. Nor need the emphasis on experiential learning preclude the use of information technology: Cassel recommends the use of blogs and wikis to foster collaboration among the students and, potentially, community involvement.

Similarly, Elizabeth Giddens' contribution begins with some ironic reflections on the 'retreat narratives' that were especially popular among the ecocritical vanguard, but are sometimes read with bemusement by undergraduates. Adopting a text that is overtly dialogic connects her to ecofeminist pedagogy, as well as suggesting valuable strategies for negotiating the exceptionally polarised environmental debate in the United States. John McPhee's book, described in Giddens' essay, illustrates the intelligence, as well as passion, with which green issues can be contested, providing a powerful contrast to the anonymous fulminations that blight the blogosphere. The context provided for it by Giddens' course clarifies that rhetorics have consequences, which may not be entirely obvious to students who conduct much of their lives through social networks and mobile telecommunications. Working with such impressive models, students

can be encouraged to see environmental writing as a demanding and responsible *professional* activity.

The 'place' of place-based learning is, then, becoming increasingly complex, including both the sensuous immediacy of phenomenological approaches and the proliferating loci of electronic mediation. Literatures that have traditionally been studied for their insights into the human condition – transected by race, gender and class, but seldom differentiated geographically – look quite different when the environs of the classroom are allowed to register within it. Kevin Hutchings, a scholar of British Romanticism, finds that its celebrations of the bucolic peace of nature has something of a sardonic ring in Northern British Columbia, with its demanding climate and intrusive megafauna. While acclimatising his students to a cool, temperate and insular literature, Hutchings encourages reflection on two contrasting points: the numerous ways in which Romantic 'nature' is distinct from modern ecology, and the enduring Romantic influences upon ecocriticism.

In the last contribution to the 'Scoping Scales' section, Erin James discusses a new graduate course on ecocriticism and postcolonialism at the spiritual home of ecocriticism, the University of Nevada in Reno. As she observes, Rob Nixon has given the most persuasive account to date of the necessity of splicing postcolonial studies with ecocriticism, but also the difficulties involved in birthing such a chimera. The questions posed for 'eco-poco' criticism are simultaneously theoretical and pedagogical: can and should it still be place-based? How can students come to know the place from which a literary work has come without international travel? Can their knowledge be in any sense 'embodied'? And is it likely to bias their own identities towards postmodern hybridity or critical translocality? James's response promotes a novel and intriguing notion of embedded 'environmentality' in place of the evaluation of more or less accurate representations of external ecologies, which helps to alleviate the problem of biogeographical distance. The danger must be that students are less able to detect and assess *mis*representations without direct experience of their originals, but the compensation is that cultural artefacts are seen as always already environmental rather than having nature contingently admixed.

Ecocriticism should be demandingly interdisciplinary. At the least, it requires engagement with the biological sciences, which was historically cross-fertile with literature until separation by

specialisation (and later outright hostility) developed in the course of the twentieth century. Louise Westling, an eminent ecofeminist critic and experienced interdisciplinary instructor, explains how the desire to escape the 'defensive enclave' of the humanities has inspired critics to construct bridges across the abyss between the 'two cultures' of science and the humanities. Philosophers have already led the way in this regard: while the daily 'first order' work of observation, experiment, report and review is rightly left to trained scientists, the 'second order' business of clarification of concepts and critical examination of assumptions and implications has been substantially advanced by individuals such as Daniel Dennett in psychology, and Elliot Sober and Mary Midgley in evolutionary biology. It is just starting to become clear how ecologically orientated literary critics and theorists can play a similarly constructive role in scientific progress, although, as Westling points out, doing so may involve relinquishing some reassuring, supposedly 'ecological' nostrums about natural balance and harmony.

Pedagogically, the deepest commitment of ecocriticism is still to the notion of place as, in some sense, locale. Mitchell Thomashow's superb *Bringing the Biosphere Home* (2001) is subtitled 'Learning to Perceive Global Environmental Change', an endeavour which is not, as he readily admits, possible without technologies of environmental surveillance and representation. Yet despite showing persuasively that observation at different temporal and spatial scales, with and without electronic prosthesis, yields valuable insights, he protests that he 'is not willing to let go of [a] place-based philosophy' (p. 176). Ursula Heise, by contrast, provides a pedagogical slant on the argument for the unavoidability, complexity and heterogeneity of globalisation she developed in *Sense of Place and Sense of Planet* (2008). Heise's key interdisciplinary relationship with sociology provides her critical vocabulary of postmodern risk and cosmopolitan identities, brought to bear here upon the travel narratives of both professional writers and students. Objective analysis of the problematics of cultural appropriation and misrepresentation is thereby combined with the compelling resonance of personal experiences.

'The Return of the Animal', by Bart Welling and Scottie Kapel, addresses the learning opportunities and challenges that confront our kindred spirits in Animal Studies, a vibrant field parallel to, and sometimes overlapping with, ecocriticism. While the precise ethical

orientation of individual researchers and teachers will diverge, all would probably want to challenge anthropocentrism, or 'human racism', and urge profound reconceptualisation and practical change in our relationships with the full range and diversity of 'Earth Others'. Animal Studies courses are ideally suited to experiential learning and community engagement, as students will often be passionately motivated to research topics such as hunting, vivisection and intensive farming. In particular, Welling and Kapel note that students are keen to find counter-evidence to John Berger's seminal argument in 'Why Look at Animals?' that modern animals have either been 'transformed into spectacle' or reduced to the anthropomorphised 'mirror' that we call a 'pet' (2001, pp. 266–267). They will find that both creative and destructive relationships to animals are frequently more complex and awkwardly intimate than Berger allows.

Mohandas Gandhi famously responded to a reporter's question about Western civilisation: 'I think it would be a good idea'. The humane ambition of the 'humanities' is likewise not yet fulfilled, and yet, as Welling and Kapel aver, both Animal Studies and ecocriticism seem ready to be part of the 'animalities' or 'posthumanities' that will supersede them. There is nothing misanthropic about this recentring, however, which is really an enlargement of the range of 'people' which ethics and aesthetics need to consider, rather than a substitution of furry for naked ones.

The last interdisciplinary encounter for ecocritical pedagogy is with the most hotly contested of modern sciences: climatology. My essay, co-authored with Hayden Gabriel, explores a range of possible responses to the difficulties peculiar to the study of climate change in the humanities, among them organised and autodidactic scepticism, apocalyptic apathy and the vast temporal and geographical scales involved. Just to take one example: Mike Hulme points out in *Why We Disagree about Climate Change* that 'our achievements [if any] in reducing emissions today and in the future will only slow down the rate of climate change beyond about 2050' because of the inertia of the planet's climatic systems (2009, p. 121). Not only are the normal moral circuits of causation, responsibility and blame likely to be tested beyond their limits by such a delay, so too are the narrative infrastructures of the obvious genres with which we might represent it: apocalypse, jeremiad and dystopia. Even so, our essay seeks to provide a basic 'toolkit' of activities that progress from

rigorous textual and conceptual analysis to the constructive creative and critical work by which hope and commitment are inspired.

The essays canvassed so far share with the overwhelming majority of ecocritical research an emphasis on literature and film, with digital media in a supporting role facilitating information retrieval, assessment or intercultural knowledge acquisition. Thus, for instance, the regional, ethnic and generic breadth of the excellent *Teaching North American Environmental Literature* anthology contrasts with its limitation to the print media. Such a bias enervates ecocriticism precisely where it most urgently needs to gain critical purchase: on the Internet, where environmental knowledges are produced and contested far more rapidly and energetically than in books or even magazines. As Anthony Lioi argues, it is not only the residual Arnoldian criteria of literary critics that require re-examination; our most familiar pedagogical models of 'cultural accretion' need to be supplanted by the metaphor of 'nesting' diverse materials, both canonical and popular. The 'convergence' of multiple media, in which digitised text, music and static or moving images can be transmitted in effectively interchangeable formats, has already transformed the socialising and informal learning habits of our students. Lioi's essay suggests for the first time how it might impact formal instruction in the electronic/ecological humanities.

Ecocriticism was not slow to engage with mainstream film, by contrast with digital media, but it has tended, as Adrian Ivakhiv points out in his essay, to analyse movies thematically, much as if they were literary texts. Expanding on this approach with a rigorous theoretical framework derived from process philosophy, Ivakhiv advocates an 'ecocinecriticism' that would critique the 'three ecologies' of every film: the material, the social and the perceptual. Examining the direct and indirect environmental impact of a particular production would expose its material ecology, while considering its political or cultural impact would illuminate its social ecology. Traditional thematic criticism would be a part of the understanding of its perceptual ecology, but so too would be interrogation of the 'geomorphic' and 'biomorphic' techniques by which the film frames, elicits or produces places and non-human life forms. Ivakhiv's conceptual structure is not only philosophically sophisticated, but is hierarchically organised and exemplified so as to offer a clear and productive approach to teachers.

Our final contribution, by Timothy Morton, is at once a delightful *jeu d'esprit* and a serious challenge to extant ecocritical pedagogy. Deftly bypassing the tired assumption that, for deconstructionists, there is nothing either epistemologically accessible or even of interest beyond the text, Morton epitomises the possibility of a productive, rather than a combative, relationship of deconstruction and ecocriticism. His reflections also initiate a welcome realisation of the 'considerable potential' which I recently noted 'for the development of pedagogies interarticulated with queer ecocriticism' (2010, p. 242), which had seemed to risk ossification in the stance of conceptual critique (of discourses of wild purity, of heteronormative natures and so forth). Morton's is a pedagogy of *inwardness*, radical openness and friendliness to the world, which will be familiar to practitioners of meditation but much less so to literary scholars in their professional capacities. Deconstruction thereby becomes the enemy, not the accomplice, of postmodern cynicism – the 'hipness unto death' diagnosed by Mark Crispin Miller, at once sneering at and consenting to consumerism.

As Kerridge reminds us in his essay, the notion of interconnectedness is a truism of environmental thought, but scholarly research is, in the main, solitary if not unaided. The seminar room and the field trip are not only where ecocritics find – hopefully without too much self-delusion – the ethical relationship that might redeem our material and professional privilege; it is also where much of our direct ecological impact, for good or ill, occurs. As teachers and employees, it is where our responsibilities as both citizens and consumers are at once multiplied (by the number of students we teach, the number of books we order) and, too often, hidden by bureaucracy, bad faith or just exhausted disaffection. As David Orr has observed, all education is already environmental: its practices have ecological impacts and its overt and hidden curricula carry ecological meanings and implications. The point of ecocritical pedagogy is to make its existing environmentality explicit and, above all, sustainable.

Works cited

J. Berger (2001) Selected Essays, ed. G. Dyer (London: Bloomsbury).

L. Buell (2005) *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination* (Oxford: Blackwell).

L. Christensen, M.C. Long and F. Waage (eds) (2008) *Teaching North American Environmental Literature* (New York: Modern Language Association).
H. Crimmel (2003) *Teaching in the Field: Working with Students in the Outdoor Classroom* (Salt Lake City: University of Utah Press).
T. Eagleton (1983) *Literary Theory: An Introduction* (Oxford: Blackwell).
G. Gaard (2010) 'New Directions for Ecofeminism: Toward a More Feminist Ecocriticism', *Interdisciplinary Studies in Literature and the Environment* 17:4, 643–665.
G. Gaard and P.D. Murphy (1998) *Ecofeminist Literary Criticism: Theory, Interpretation, Pedagogy* (Urbana and Chicago: University of Illinois Press).
G. Garrard (2010) 'Problems and Prospects in Ecocritical Pedagogy', *Environmental Education Research* 16:2, 232–245.
U. Heise (2008) *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* (New York: Oxford University Press).
M. Hulme (2009) *Why We Disagree about Climate Change* (Cambridge: Cambridge University Press).
P.D. Murphy (1995) *Literature, Nature, and Other: Ecofeminist Critiques* (Albany: State University of New York Press).
M. Thomashow (2001) *Bringing the Biosphere Home: Learning to Perceive Global Environmental Change* (London: MIT Press).
F. Waage (1985) *Teaching Environmental Literature: Materials, Methods, Resources* (New York: Modern Language Association).

2
Ecocriticism and the Mission of 'English'

Richard Kerridge

Environmentalism has been prominent in public culture since the early 1960s. The publication in 1962 of Rachel Carson's *Silent Spring* provides a start date; a moment when environmentalism as a cohesive and challenging set of concerns leapt into the news. In the years that followed, the political movement emerged, challenging established politics with a new set of interests and priorities.

Necessarily, the ideas were not entirely new. People who were already lovers of wild nature or pioneers of organic farming felt vindicated but also daunted by the scale of the problems now coming into view. Environmentalists drew upon many traditions, but had to identify precisely what they were taking and what they had good reasons for rejecting. Romantic love of wild nature was one such tradition, classical pastoral another. Nostalgia for pre-industrial life had been a feature of many political and cultural movements, conservative and revolutionary. Theories of the alienating effect of modern technological and industrial society were to be found in many critical traditions. Environmentalists needed to define themselves against the traditions they used, as well as the ideas they were obviously opposing. Even the elements most compatible with environmentalism were transformed by it, as they were drawn up into confrontation with a global crisis of unprecedented scale and pervasiveness, especially when global warming entered public discourse in the late 1980s. In its campaigns to change the priorities of governments, environmentalism has suffered many defeats, but in public culture it has become a familiar presence, finding its way into the arts, various genres of popular entertainment, tourism, advertising, popular hobbies and all levels of education.

Environmentalists may reflect bitterly that the environmental message is just about everywhere, yet makes too little difference to the kinds of behaviour that count.

That it should be everywhere, from TV cookery programmes to new readings of Shakespeare, is consistent with the essence of ecology as a discipline – its perception of the world as evolutionary ecosystem in which lines of connection extend in all directions. By continuously adapting to each other, the different creatures and elements are reshaping each other and the physical world they inhabit – their local ecosystem and beyond it the global ecosystem or biosphere. Timothy Morton, an ecocritical theorist attempting to combine ecological insights with those of poststructuralism, calls this principle of interconnection 'the ecological thought', and takes it into human affairs and culture: 'The ecological thought is a thought about ecology, but it's also a thinking that is ecological' (Morton 2010, p. 7). Traditionally, the all-encompassing metaphorical figure for ecological interconnection is 'Nature's web', but Morton wants to make it clear that artificial things are included. He prefers to dispense with the restrictive concept 'Nature', and proposes 'mesh' instead of the 'too vitalist' and 'Internet-ish' 'web' (p. 28).

An ecological approach to culture will be guided by this principle of looking for interconnections, and by the related ecological concept of the 'niche': the set of conditions, including climate, food, shelter and the numbers of competitors and predators, that makes it possible for a species to survive in an ecosystem. Such an approach to culture will look at the different cultural zones or niches that certain activities occupy, the most obvious examples being such demarcated 'spaces' as work and leisure, public and private or social and domestic. The search will be for interconnections, but also for barriers that keep things apart, permitting the co-existence, in separate spaces, of supposedly incompatible forces. For environmentalists, the most important example of this co-existence will be the way environmental values and concerns can be professed and felt deeply by people without decisively changing those people's behaviour, and the way this personal inconsistency is mirrored by that of politicians who express belief in the terrible danger of global warming but do not take action as if they really believed. In public culture, what are the spaces in which environmentalism flourishes, and why does its flourishing there have so little effect elsewhere?

When 'the ecological thought' comes to English Studies, then, it must concern itself with the niche that the discipline occupies and seeks to occupy. Ecocriticism, an environmentalist version of English Studies, is quite well established and has been developing since the early 1990s. Ecocritics follow other political schools of criticism in formulating new critical criteria, reinterpreting and re-evaluating canonical texts according to those criteria, and proposing additions to the canon. They analyse the history of concepts such as 'nature', 'wilderness', 'humanity', 'the animal' and 'progress', looking for the cultural origins of attitudes implicated in the present crisis, and asking how these concepts should now be modified. Landscapes, climate, weather, plants, animals and children acquire new symbolic meanings precisely insofar as they are threatened, which can change the way we read historic texts, shifting the balance – always under negotiation anyway – between reading those texts with the aim of historical understanding, and reading them according to our present-day sensibilities. Ecocritics turn naturally, too, to recent writing that explores the ecological, political and emotional ramifications of the environmental crisis, or develops future environmental scenarios.

Another balance brought into question is that between interpreting a storm or an owl in a literary work in metaphorical and symbolic terms (what does it represent?), and interpreting it directly and literally, as a real living owl (it represents itself, primarily). Jonathan Bate, in the first British book to declare itself a work of ecocriticism, says this of Wordsworth's 'There Was a Boy':

> Of course, Wordsworth's poem about the boy of Winander addresses itself to the workings of the mind and the power of imagination. But let us not forget that it is also about a boy alone by a lake at dusk blowing mimic hootings to unseen owls. Which are there to answer him. (Bate 1991, p. 115)

Bate also asks how people's experience of Keats' poem 'To Autumn', with its line 'And gathering swallows twitter in the skies', will be changed if global warming affects the population and migration of swallows, making them disappear from English skies (p. 2). In a later work he makes readings of 'To Autumn' and Byron's 'Darkness' that use historical weather records (Bate 2000, pp. 94–110). Bate argues that these poems need from their readers the recognition that comes

from direct experience. If the ecosystem that produced the poems changes, the poems lose their meaning and their relationship with readers' lives, and are diminished. In such readings, questions of ecological accuracy come to the fore. Is the literary representation consistent with what we know about tawny owls or swallows? Suddenly this matters. Come to that, are the symbolic and metaphorical meanings, too, consistent with the ecological knowledge we have now, and, if not, should those meanings change?

Ecocriticism brings new material to the classroom – new ways of looking at literature and some new methods of teaching. Some of these I will describe, but first I want to backtrack and look at the subject, 'English', itself, in terms of Morton's 'ecological thought'. Which traditions of literary study are most adaptable to environmentalist thinking? How will ecocriticism play into the older battles in the subject? Bate once asked, teasingly, 'do we really need a "green" literary criticism to go with our lead-free petrol and ozone-friendly deodorant?' (Bate 1991, p. 9). That is, what does 'English' have to offer environmentalism, and does environmentalism need it? The converse question follows: what has environmentalism to give (or restore) to 'English'? And will the environmentalist approach to English Studies remain a specialist approach, or become part of the integrated vocabulary of literary criticism?

An aspiration that recurs in the history of the discipline is the idea that 'English' defines and holds a space of opposition to industrial instrumentalist rationality: clearly an attractive idea for ecocritics. There may be strong continuities between their diagnosis of the beliefs and political systems responsible for environmental crisis and the diagnosis of social and moral ills which defines the historical mission of 'English', at least in the 'liberal humanist' idea of the subject: the tradition running from Matthew Arnold's account of culture as a defence against anarchy in the 1860s, through to the Leavisite model that was dominant in English Studies from the 1920s to the 1970s. In *Culture and Anarchy* (1869), Arnold describes the enemy of culture as one who seeks to affirm his or her 'ordinary self', not 'best self', and whose thoughts are filled with 'industrial machinery, and power and pre-eminence and other external goods', not 'inward perfection' (Arnold 1994, p. 71). This notion of culture's opponent became familiar in English Studies in the first half of the twentieth century.

In *Culture and Environment* (1933), F.R. Leavis and the schoolteacher Denys Thompson offer a description of unalienated labour:

> their hands, their brains, imagination, conscience, sense of beauty and fitness – their personalities – were engaged and satisfied. Just as their master was not merely concerned for his profits, so they were not merely concerned for their wages. (Leavis and Thompson 1933, p. 75)

Their idealisation is based on George Sturt's account of pre-industrial village life in *The Wheelwright's Shop*, but it is also a model of what literary study, in the Leavisite form, aspires to be. Leavis and Thompson move from rural craftsmanship, which they acknowledge to be dying or losing its social context, to a discussion of English Literature teaching in schools. Literary study is an attempt to build a substitute for a premodern culture that has been lost – one in which the arts have public meaning connecting them with ordinary work and leisure:

> [L]iterary education, we must not forget, is to a great extent a substitute. What we have lost is the organic community with the living culture it embodied . . . can art of life, a way of living, ordered and patterned, involving social arts, codes of intercourse and a responsive adjustment, growing out of immemorial experience, to the natural environment and the rhythm of the year. (pp. 1–2)

This 'organic' social culture was sensitive to the natural world and the interdependency of its different elements, Leavis and Thompson believe, because the rituals and symbols in the culture renewed traditional environmental knowledge derived from ancient forms of labour. The task of English Studies is to recreate something like this in modernity, which means teaching, through reading literature, a set of values that will contend with 'the multitudinous counter-influences – films, newspapers, advertising – indeed, the whole world outside the classroom' (p. 1); that is, modern consumerism. Hence English aims to move students beyond the reductive, merely economic sense of what is valuable. Leavis's social role of 'English' is his adaptation of Arnold's division of the self into 'ordinary' and 'best' selves.

For ecocritics, the environmental correlative of this vision of the unalienated self would be a neo-indigenous self possessing a new

version of the sensuous relationship with a natural environment that was lost with industrialisation, as in the popular ecophenomenology of David Abram's *The Spell of the Sensuous*. The ecocritical 'best self' would not only be unalienated in this way, but also capable of valuing the material ecosystem services provided by any part of nature – the carbon-fixing service provided by a forest, to take an obvious example – and the human and cultural needs met by the forest, rather than seeing the forest reductively and self-interestedly as a source of industrial raw material and personal profit. Indeed, there may be an intricate compatibility between the forms of recognition encouraged by ecocriticism and those fostered by liberal humanist sensibility, since each relies on a holistic account of human need and selfhood, and each has a sympathetic eye for all the living members of a social or ecological setting and all the impulses to life.

Arnold's 'ordinary' self thinks in terms of self-interest defined in narrow terms – self-interest as a competitive interest, or class-interest, or provincial interest, and in terms of specific objects of desire – while the 'best' self is able to detach itself from these identifications and interests and think more openly and disinterestedly, in terms of ethics and sympathy: 'By our everyday selves . . . we are separate, personal, at war; . . . But by our *best self*, we are united, impersonal, at harmony' (Arnold 1994, p. 64). The 'best self' achieves this detachment without disappearing into abstraction. In the tradition of 'practical criticism' and close evaluative reading, literary study offers the experiential intensity of emotional identification with fictional characters or poetic personae, combined with an ethic of detachment from direct personal interest. Because the characters and plots are fictions, so the argument goes, and the reader has no direct stake in the conflicts depicted (though plenty of indirect, generalised stake), defences will fall, and the reader will be capable of greater imaginative sympathy than in the direct encounters of real life.

Poststructuralists, of course, viewed these early aspirations of 'English' with intense political scepticism. In practice, however, their influence has probably tended to confine the subject to academic space even more, since the complex self-consciousness they construct as the means of resistance to ideology looks to the uninitiated like formidable density and technicality of style, far removed from any language of personal experience. Before I move to that, it is

worth noting that the liberal humanist idea of the humanities as a space of resistance to commercial commodification is currently being re-articulated, in the face of moves by governments to prioritise the technical and scientific subjects and redefine education much more exclusively as training for employment. In Britain, the arguments advanced to justify large increases in university fees have consisted largely of claims about the earning power a degree will bring. Education is redefined primarily as a private and commercial good; other conceptions of personal and public value come far behind. Martha Nussbaum fears that these trends are 'producing a greedy obtuseness and a technically trained docility that threaten the very life of democracy' (Nussbaum 2007, p. 23). Kate Soper writes that:

> The vocational turn in higher education is driven by a growth model of the economy that puts profits before human welfare and is ultimately unsustainable. If affluent societies are successfully to meet the environmental and social challenges of the future, they need to begin now to plan for a shift to a more materially reproductive way of living, to a low- or no-growth economic model rooted in an expansion of leisure time and rather different conceptions of social flourishing and human wellbeing. (Soper 2010)

Soper, a philosopher investigating alternative, non-consumerist forms of hedonism, sees the humanities as having common cause with environmentalism in resisting these redefinitions.

The tradition of seeing itself as resisting commodification and consumerism has been both a strength and a weakness for English Studies. Defining the subject as a separate zone arouses the suspicion that there has been both retreat into that zone. Critique that stays too much within its privileged space is open to the charge of complicity; it has found a niche and is content to protect it. Marxist critics have argued that to declare a cultural space as a space of resistance to commodification is an extremely potent way of commodifying that space and whatever you do in it. Perhaps an ordinary self is at work in English after all, protecting a privileged space under the cover of idealistic claims about the best self. With that, there is the objection, coming variously from feminism, postcolonial theory and Queer Theory, that the rhetoric of openness has always disguised political forms

of closure, often achieved by the imposition of a supposed 'human nature' that erased difference and concealed oppression.

Ecocritics find in these objections some parallels with ways in which their own protection of demarcated spaces – wilderness, wild nature – have at times been accused of exclusiveness: in America by the environmental justice movement, which champions the environmental causes of the urban and rural poor and of oppressed ethnic groups. Since these questions about English Studies are about the way niches give space to alternative values but confine them in that space, they will be of great sensitivity for ecocritics, who will want to bring the questions into the classroom as vital tests.

Timothy Morton argues that in order to avoid such exclusions and complicities – in order, that is, to see 'the ecological thought' in its full implication – we must push the old conception of 'nature' out of the way. He exemplifies the recent ecocritical thinking that embraces the poststructuralist, Foucauldian perception that all concepts are discursive – always in a moment of being generated and used in a context of power relations. The idea of a stable and unified 'nature', imagined as a permanent set of conditions making the non-historical ground on which human history plays, is for Morton akin to the conception of the self as unified and non-discursive. In turn, the idea of selfhood as unified and non-discursive entails the same conception of nature.

If 'nature' is not to be abolished, it must be reconceptualised. One result of discourse-theory is a tendency to identify culture with fluidity, play, constant exchange and the possibility of liberation, and nature with intractable, fixed identity. In its emphasis on the role of language and culture in forming our beliefs about the world, discourse-theory tends to neglect the material processes of that world, identifying materiality, like nature, with intractability. Ecofeminists Stacy Alaimo and Susan Hekman put it thus:

> Even though many social constructionist theories grant the existence of material reality, that reality is often posited as a realm entirely separate from that of language, discourse and culture. This presumption of separation has meant, in practice, that feminist theory and cultural studies have focused almost entirely on the textual, linguistic and discursive. (Alaimo and Hekman 2008, p. 3)

Alaimo, Hekman and other ecofeminists recommend a 'materialist turn' in feminist and ecocritical studies: not an abandonment of discourse-theory but its extension to the material world. These materialist ecofeminists – many engaged in Science Studies – include Donna J. Haraway, Stacy Alaimo, Susan Hekman, Karen Barad and Catriona Mortimer-Sandilands. They use the term 'material-discursive' to signal their bringing together of two principles previously considered incompatible.

Poststructuralists and discourse-theorists do not use totality and finality of knowledge as their conceptual model. They regard these aims as part of the culture of domination that has oppressed women, people of colour and homosexuals, while heedlessly exploiting natural ecosystems. The will to complete and attain final knowledge is the will to objectify and control, since the idea of such knowledge is also the idea that there is no further need to engage with its object in any spirit of openness to new experience. The alternative proposed by 'material feminists' is that we should always attempt to move to a response to the world that honours the endless mutuality of making: the collective world-making carried out unceasingly by humanity and the non-human world. Ecocritics should relish that process and bring critical intelligence to bear on it. 'Material feminism' calls for an extension of discourse-theory from culture to nature and the whole material world. Barad introduces the term 'agential realism' as a way of acknowledging the agency of material things: the active role that they play in the making of meaning. It is a 'posthumanist' account of agency that extends it beyond human consciousness and action. Instead of the familiar term 'inter-actions', which implies the relatively separate engagement with each other of separate entities, she talks of 'intra-actions', a term that situates the action as always already inside a larger flow. The term constitutes a recognition that 'relata do not pre-exist relations' (p. 133), and that human beings are 'part of the world in its open-ended becoming', the endless process of mutual shaping that constitutes all matter.

A memorable example of how this mutual shaping constitutes human beings is given by Catriona Mortimer-Sandilands, in an essay combing philosophical discussion with an account of how her mother suffered from Alzheimer's disease. It is a powerful example of what the ecocritic Scott Slovic calls 'narrative scholarship': scholarly writing that also tells a personal story and thus situates the author's

views in space, time and materiality, as ecocritical priorities require (see Slovic 2008, pp. 34–35). Mortimer-Sandilands reflects upon the physical process of memory formation – how each memory creates a unique 'electro-chemical pathway from neuron to neuron' (Alaimo and Hekman 2008, p. 273). As we experience the world, it makes us physically, shaping the organs with which we experience it, in 'a meeting between embodied mind and active world that must include not only physical experience but social relationships, not only sensory data but the interaction between any given sense-moment and what has gone before'. With this example, Mortimer-Sandilands shows the impossibility of disentangling the cultural 'construction' that we undergo continually from the way the world produces us materially – our bodies and our identities.

For literary studies in the classroom, these ideas would suggest the necessity of mediating between two aims: the aspiration to scholarly impersonality in reading, and the contrary recognition that reading is 'situated' and 'embodied', always taking place at a moment in someone's life and somewhere in physical space. Many of the students I teach say that they have been told never to use the first person when writing essays. Perhaps this idea comes mainly from their pre-university education. An ecocritical practice influenced by 'material-discursiveness' would contest it, saying instead that personal narratives of reading, including emotions and bodily reactions, and the influence of other things going on in the person's life at the time of reading, should be brought into dialogue with impersonal scholarship, just as present-day responses to texts should be brought into dialogue with historicist readings. These personal, 'situated' responses are difficult to talk and write about, and difficult to connect – as environmentalism says they must be connected – with the larger public environment. Developing a classroom vocabulary for these responses and connections is a priority for ecocritical pedagogy.

I have presented the history and mission of English Studies in terms of dichotomies – between liberal humanist and poststructuralist approaches, between historicism and 'presentism', between impersonality and situatedness, and between the need to protect niches and the need to avoid confinement in them. I will conclude with an example of what may be a necessary and productive combination of two opposites, though a difficult balance to preserve.

Ecological crisis calls for deep changes of desire and behaviour in an impossibly short space of time. Urgency is in irreconcilable tension with the scale of what is required. Perhaps our failure to take measures to avert climate change is because there is no evolutionary conditioning that equips us to react to something that will happen in 50 years' time, probably. As Gabriel and Garrard indicate, climate change itself eludes representation because it is too slow (there is nothing for us to see) and too fast (we have not enough time to adapt). We need slow, deep changes and fast, pragmatic ones – the open, non-preemptive encounter with otherness *and* a rapid, utilitarian response. Ecocriticism in the classroom has to help students understand both needs and negotiate between them.

James Lovelock, in *The Revenge of Gaia* (2006), argues that the emergency of global warming calls for the simultaneous enactment of two conflicting responses – a profound change in human values corresponding to Deep Ecological principles, and, at least as an interim measure, a ruthless technological instrumentalism that overrides all objections to take measures to prevent collapse, such as the building of nuclear power stations and flood defences. How will this dialectic be possible – how will one response not destroy the other?

The correlative in English Studies of the Deep Ecological approach might be a willingness to read with an openness in which there is a commitment to a long-term engagement with the literary text that will give it the chance to answer back, repeatedly. This is an alternative to the rapid consumption of the text, or its opportunistic utilisation and reduction to commodity-value. As a teaching practice, what this idea aspires to encourage in students is the explicit aim of a lifelong relationship with literary texts – rereading and revisiting rather than discarding and obsolescence. A text is for life, not just for the degree. Here is 'slow reading' to go with 'slow food'. 'Slow reading' would treat the text as an 'other', a stranger and then an acquaintance, not to be given too much advance definition that pre-empts the particular encounter and the re-encounters to come.

But we all know about the instrumentality of literary scholarship as practised by students and career researchers. What the student may wish to extract from the text is an efficient essay that will secure the grade necessary for the job market. There is no point in lingering with the text, especially when a new one must be read by next week, and the part-time job demands time. My suggestion is that we

should foreground this dilemma in the classroom, inviting students to look at what they are doing, to be self-conscious about the trade-off involved, and to compare these two models of literary study, so that both are held in view and neither yields too much to the other. The analogy with Lovelock's argument may be useful in this process.

Ecocritical pedagogy attempts to confront various dichotomies and find provisional, shifting solutions:

- flourishing life within protected space, and the accountability of different spaces to each other
- history and present-day concern
- large-scale scientific perspectives and personal experience
- imaginative freedom and scientific accuracy
- impersonal scholarship and embodied, situated reading
- utilitarian efficiency and openness to unpredictable, unrestricted relationships with otherness (fast versus slow)

Each dichotomy has its specifically ecocritical form, but each can be found also in the larger academic discipline of English Studies. Correspondingly, the solutions ecocriticism finds will reach beyond its particular concerns.

Works cited

D. Abram (1996) *The Spell of the Sensuous* (New York: Vintage).

S. Alaimo and S. Hekman (eds) (2008) *Material Feminisms* (Bloomington and Indianapolis: Indiana University Press).

M. Arnold ([1869] 1994) *Culture and Anarchy* (New Haven: Yale University Press).

J. Bate (1991) *Romantic Ecology: Wordsworth and the Environmental Tradition* (London: Routledge).

———(2000) *The Song of the Earth* (London: Picador).

F.R. Leavis and D. Thompson (1933) *Culture and Environment: The Training of Critical Awareness* (London: Chatto & Windus).

J. Lovelock (2006) *The Revenge of Gaia: Why the Earth Is Fighting Back – and How We Can Still Save Humanity* (London: Allen Lane).

T. Morton (2010) *The Ecological Thought* (Cambridge, MA: Harvard University Press).

M.C. Nussbaum (2007) 'Education for Profit, Education for Freedom' (First annual Seymour J. Fox Memorial Lecture, The Hebrew University of Jerusalem, and Opening Plenary Address, Association of American Colleges

and Universities, Washington, DC), http://auroraforum.stanford.edu/files/essays/Nussbaum_Educ_for_Profit_Freedom.pdf, accessed 17 February 2011.
S. Slovic (2008) *Going Away to Think* (Reno: University of Nevada Press).
K. Soper (2010) 'Humanities Can Promote Alternative "Good Life"', *The Guardian*, 30 November 2010', http://www.guardian.co.uk/commentisfree/2010/nov/30/humanities-promote-alternative-good-life, accessed 17 February 2011.
K. Soper, M. Ryle, and L. Thomas (eds) (2009) *The Politics and Pleasures of Consuming Differently* (Basingstoke: Palgrave Macmillan).

Part I
Scoping Scales

3
Walking in the Weathered World

Adrienne Cassel

I teach at a community college in a small metropolis in Ohio. Dayton was impacted tremendously by the economic downturn of 2008, resulting in heavy layoffs at one of the major employers in the area, General Motors. Approximately a fifth of the students in the Eng 112 (Academic Research Writing) that I am currently teaching are some of these laid-off factory workers. Designated 'Displaced Workers', the challenges they face go beyond those of most college students and the chance of them recovering the income and lifestyle they were accustomed to is slim. The college has successfully secured grant funding for programs to help pay for the students' schooling and provide them with academic and psychological support for their academic success, but understandably, the goal is not so much getting an education as it is getting a job. Although enrichment and enlightenment are often unexpected by-products for these students, this is not their main objective for attending college; they are here to become marketable in the new economic situation.

While the administration's focus on helping students obtain jobs is worthy and necessary, without providing them with the skills and coping mechanisms for seeing beyond their current situation, as educators, we sell ourselves and the students short. There has to be more, and that 'more', I believe, is to incorporate into our pedagogy ways to help students understand that many of the problems they face are not just personal or local; instead, that they are part of the larger problem of the consumer culture in which they live, and more importantly, that they are *not* powerless in the face of this situation. However, to ask students to examine their personal situation

critically, especially in light of their current status as 'displaced', one runs the risk of ignoring what Nancy Fraser in *Justice Interruptus* calls the 'postsocialist condition', a condition that severely inhibits the incentive to work toward social change, change that should include environmental equity as a condition of economic equity. As Fraser points out:

> Many actors appear to be moving away from a socialist political imaginary, in which the central problem of justice is redistribution, to a 'postsocialist' political imaginary, in which the central problem of justice is 'recognition.' The result is a decoupling of cultural politics from social politics, and the relative eclipse of the latter by the former. (Fraser 1997, p. 2)

According to Connie North, this move away from redistribution of goods and services leads to a denial of how economic disadvantage and cultural norms devitalise 'efforts to improve the lives of marginalised, exploited citizens in the current political economy, dominated by Western capitalism's "pervasive materialistic individualism and destructive hedonism" ' (2006, p. 508).

Using an experiential, ecocritical approach to teaching research writing, and requiring students to focus their research on one of the places in which they live, work or learn has allowed me to tackle the pedagogical responsibilities I outlined above while providing students an opportunity to articulate and reflect on 'diverse and incompatible views of the good life and establish a neutral framework of justice whose principles apply equally to all', which is what John Rawls in *Justice as Fairness: A Restatement* calls the first principle of social justice (p. 42). In the course, the students 'decide for themselves what conception of the good to pursue, understanding that every other [student] shall enjoy the same liberty' (Reich 2002, p. 35).

The culminating project asks students to explore how and why they live, work and learn where they do and what values are represented by those places. Then I ask them to choose one aspect of those places that could be changed to bring their current situation into closer alignment with their vision of what Henry David Thoreau calls 'sucking the marrow' out of life. As Thoreau defines it in 'Where I Lived and What I Lived For', 'sucking the marrow' out of life is living in such a way that one's moral and ethical values are put into action.

Students articulate their values by responding to writing prompts modelled after Thoreau's, and then design research projects that lead to making a change in their environment that reflects their values.

By asking students to examine their neighbourhoods and work places in order to identify the values of the people who live in them, I 'envision', as Derek Owens explains in *Composition and Sustainability: Teaching for a Threatened Generation*,

> composition studies as environmental studies – not as an offshoot of ecology but as the study of one's immediate and future environs (city blocks, mall parking lots, backyards, office cubicles, apartment buildings, crowded highways) so that students might explore how their identities have been composed by such places and vice versa. This approach conceives the writing workspace as a place for students to explore what they consider right and wrong about where they work and where they live; a site for thinking about the cultures and families that matter to them. (2001, pp. 6–7)

That does not mean that we do not talk about the ecological aspects of how they live; however, that objective is met obliquely, so that there is room for critical thinking about their local place without the shaming that is often associated with asking students to engage in an ecological assessment of any aspect of their lives, whether it is location, social networks, form of transportation or anything else. The project also provides a means to empower the students to engage in direct action, because if they follow their project to fruition, they outline the necessary steps toward the removal or revision of at least one tangible impediment to what they define as the 'good life'. In other words, they learn how they might go about creating a physical space that reflects the values they embrace – values *they* define.

'Ideas about the value of the natural world are, and have always been, integral to the repertoire of arguments that Americans use to try to persuade one another of the character and implications of common commitments', argues Jedediah Purdy in 'The Politics of Nature: Climate Change, Environmental Law, and Democracy'; therefore, 'How we understand nature is part of civic identity' (2010, p. 1207). The readings and the media for the course encourage ecocritical

thinking about civic identity because the assignments require students to connect what they read to where they live. The connection with the neighbourhood project requires students to question what they see as a priority for local policy making. Further more, the readings introduce them to a brief 'account of the ways that the political struggles of a democratic community have created new, and always contested, ideas of "nature" throughout American history' (ibid., p. 1122). In addition to the mostly expected canonical readings in this genre, readings such as Thoreau's 'Where I Lived and What I Lived For', Aldo Leopold's 'Thinking Like a Mountain' and Rachel Carson's 'A Fable for Tomorrow', I have added an op-ed piece, Daniel Gilbert's 'If Only Gay Sex Caused Global Warming', which provides an opportunity for students to critique a contemporary argument about the psychological aspects of environmental activism. Gilbert's piece is funny and challenging and thus helps to spark student interest in contemporary issues of rhetoric and environmentalism. We also watch several documentaries, which provide an engaging introduction to contemporary environmental and ecological concepts. Without any planning on my part, a global perspective has evolved through the research project topics chosen by students. For instance, they have discovered that predominantly African-American neighbourhoods in New York and Mississippi are losing large chain grocery stores that the community has come to rely on for food and jobs, similarly to the neighbourhoods in which they live, and that citizens in Brazil and China are also attempting to create more parks in residential urban areas.

What I am doing is not new in ecocritical pedagogy, but what is unique about this academic research writing course is that it includes walking as one of the major requirements. Students are asked to take twice-weekly walks in their neighbourhoods, and every other week, an 'expert' (a colleague or professional from the community) leads students on a 'hike' near or around campus during class time. The expert talks informally about environmental issues they observe. Walk leaders have included a geologist, an artist, a naturalist, the director of the college's Green Energy Center and a farmer who directs a local community-supported agriculture initiative. The talks have covered such things as the watershed, geology, the impact of the environment on art displays around campus, birdwatching and the environment, and how a solar panel works. Although students

are not required to write about the topics covered in the expert walks except in reflective writing assignments, and although the walks are not necessarily in or about 'nature' or 'wilderness', the walks do expose students to aspects of environmental concerns that they would not have encountered in a 'regular' academic research writing course. Of course, students are also exposed to some natural phenomena and ecological principles of sustainable wilderness practices, but not through 'ah-ha' moments in nature. Instead, the course leads them through a process that mimics the one that Aldo Leopold describes in 'Thinking Like a Mountain', the experience that led him to change his thinking on the conservation practices regarding wolves in the US (1987). Students first look for tensions or conflicts they have experienced in their own lives because of the places in which they reside and then they work to determine how those experiences fit into a larger framework of public policy. This approach grounds the learning experience in the locales in which students live, learn and work, and thus avoids the elitism that is perceived by many as inherent to nature-focused courses (Cronon 1995, p. 69; Nordhaus and Shellenberger 2007, pp. 5–6).

Another unique component of the course is the way that the course introduces students to twenty-first century literacy skills that Henry Jenkins claims 'make it possible . . . to archive, annotate, appropriate, and recirculate media content in powerful new ways' when their use 'also foster[s] the skills and cultural knowledge necessary to deploy those tools toward our own ends' (2009, p. 8). Moreover, Annette Kolodny has argued what is important rhetorical work is 'finding new languages to address environmental issues, languages that break down rhetorical barriers and meet people where they are' (quoted in Ingram et al. 2007, pp. 125–126). Meeting my students 'where they are' *requires* meeting them both online and in the city. It also requires helping them to get a bigger picture of 'where they are'. Using these new technologies, specifically blogs and wikis, is important because, as Tim Lindgren explains, '[t]he environmental crisis is not just a scientific issue that involves providing more evidence of global warming, species extinctions or pollution. Rather, it is an issue of cultural ideologies that shape the decisions people make' (Mathieu et al. 2006, p. 115). So, as Malcolm McCullough in *Digital Ground: Architecture, Pervasive Computing, and Environmental Knowing*, argues, '[h]umanity naturally adapts to being in the world by using technology'. Thus,

the sustainability of our species depends on the appropriateness of our adaptation (2005, p. 211). These arguments lead us to William McDonough and Michael Brungart in their provocative work, *Cradle to Cradle: Remaking the Way We Make Things*, and the claim that 'the solution is not to withdraw from technology but to engage with it more fully, redesigning everything we can with greater ecological intelligence' (Mathieu et al. 2006, p. 123).

One way that students engage with twenty-first century literacy skills and new technologies is by recording their observations from their walks and reflections from the readings on individual blogs. Links to the individual blogs are posted on one course blog, providing access for discussion among the students and anyone else able to get online. Also, research projects are posted on a class wiki and individual topics are linked together via shared concerns which students discover between each other's projects and other sources they uncover via their research. In reflecting on a similar course activity, Paula Mathieu explains in 'Reading, Writing, and Enacting Cultures' that 'students developed their desires and critiques through the process of writing' and 'the act of comparison, either concrete or utopian, [becomes] a process of critical creation, through which students [are] able to form and test critiques in the light of their desires for a better place to live and work' (2006, p. 119). As Owens observes: 'Writing about the place in this context is not simply an academic exercise' but a way to 'serve the larger academic and public realms by making available student testimonies about their environments' (2001, p. 7).

These testimonies are part of what Purdy calls 'the democratic community'. Students learn about the historical 'strands of inheritance', that is to say, the various ways that the idea of nature and wilderness has changed throughout history in response to the 'public language' that was used at that point in the historical trajectory of ecological awareness. As Purdy points out, the changes occurred not by consensus but in response to the conflicting values of the various constituents in the contest for the rights to public land: 'It is in past struggles over new issues that new values found sharper and more persuasive expression and entered into public language' (2010, p. 1206).

By engaging in this type of participatory learning, the opportunity for students to take part in this larger conversation not only

empowers but it also teaches useful skills for redefining one's self and one's ideas about how one should live. Having the skills to redefine one's place in the world in the face of changing realities is invaluable to all students, but especially to the 'displaced workers' who inhabit the community college classrooms where I teach. The well-known, respected historical figures with whom students come into contact provide role models who also have had to redefine their lives and their views of the world based on new information and a changing world situation.

Scholars studying the ecocritical approach to education sometimes question whether or not readings on and in nature lead students to become better environmentalists (Garrard 2010; Mazel 2008). Unfortunately, these are questions that the colleagues and the administrators at my college do *not* ask. They ask: can students write an academic paper that demonstrates the concepts of 'good' academic writing, writing that will be accepted at a wide variety of campuses across the state? In fact, recently, the state of Ohio worked to align the objectives of all general education courses across the state so that students completing a course at one university could be guaranteed that the course would transfer to any other university in the state without question. Neither environmental literacy nor ecocritical concepts are required objectives of any of the general education courses, and that seems to be the real issue. Of course students who read nature writing and other environmental texts are going to be exposed to ways of looking at the environment that they have not encountered before and, in the course of these new encounters, their world views will be challenged if not altered. As Lawrence Buell states: 'How we imagine a thing, true or false, affects our conduct toward it, the conduct of nations as well as individuals' (1995, p. 3). He claims that:

> If, as environmental philosophers contend, western metaphysics and ethics need revision before we can address today's environmental problems, then environmental crisis involves a crisis of the imagination amelioration of which depends on finding better ways of imagining nature and humanity's relationship to it. (p. 2)

The reading assignments, the documentaries and the research projects provide new ways of imagining and talking about the

environment. The walks provide opportunities to understand that the environment is determined beyond wilderness or nature, and the blogs and wikis the students create leave a record of what they have learned, a record that can be accessed by anyone with similar interests; and so the course provides a type of service that echoes beyond the time limits or space of the course, and that reflects change that could ripple outward from the course for years. Again Derek Owens:

> [I]n cases where the fruits of such courses—the students' writings—are published in print or online journals, books, and newsletters, the composition classroom offers a means by which student testimonies can catch the attention of other faculty, administrators, and even the public. In this way, composition becomes a different kind of 'service' discipline, serving as a reminder of the conditions of our students' neighborhoods, jobs, and cultures, as well as an indication of their hopes and fears for the future. Composition would then serve students by providing a writing workspace where they could grow as writers and readers, and it would also serve the larger academic and public realms by making available student testimonies about their environments. (2001, p. 10)

The first step in changing behaviour is in making the person aware of their behaviour and its impact on others. However, if changes in behaviour are not rewarded and supported beyond the initial realisation of the need for change, the change is not going to stick. It seems, then, that the question we should ask is not whether or not the readings and discussions lead students to become better environmentalists, but how do we get faculty and administrators across disciplines to acknowledge and reinforce the changing behaviours that my students ask themselves and their neighbours to make? The questions that seem to be equally pertinent to changing students' perceptions and actions in the world are the ones that Catherine Larson asked in her essay, 'Environmental Literacy and the Curriculum: An Administrative Perspective'. As the associate dean for undergraduate education in the College of Arts and Sciences at Indiana University, Larson set herself the task of creating a cross-campus 'green' initiative that moved the vision of sustainability far beyond the individual course or student. Besides asking 'what

teaching and learning strategies might enable us to foster environmental literacy', Larson also asked what policy issues and operational practices could be implemented across her campus (p. 172). This broader vision for ecocriticism, that is to say, putting theoretical concerns into practice, is what I have tried to do with the academic research writing course.

As Purdy writes:

> The upshot is that . . . teachers should approach emerging issues in a bifocal way: both as occasions for the play of existing interests and values, and as places where social movements and political argument might bring new values into public language and rework the mutually defining relationship between values and interceders . . . [W]e are teaching responsibly only when we emphasize to our students that this field is one in which once-unthinkable ideas have become conventional, not one time only, but repeatedly, through imagination, argument and politics. [S]tudent[s] should appreciate that the field is defined not only by human solutions to a consistent set of problems and opportunities . . . nor simply by a set of constant political impetuses and constraint called interests, but also by the recurrent reinvention of human ways of encountering and experiencing the natural world. (2010, p. 1207)

I know that the readings (that I hope will lead students to recognise the connection between the places they live and the 'good' life they imagine that college will provide) and the activities (that ask them to identify and research possible solutions for environmental problems in the places they live and work) will have little impact if it is not understood and reinforced by other faculty, the administration, and the students themselves that understanding is just the *beginning* of a lifelong process of reprioritising.

Works cited

K. Anspacher-Meyer and R. Meyer (dirs) (2009) *Lords of Nature: Life in a Land of Great Predators* (USA: Green Fire Productions), 60 minutes, www.lordsofnature.org

L. Buell (1995) *The Environmental Imagination: Thoreau, Nature Writing and the Formation of American Culture* (Cambridge, MA: Belknap Press).

W. Cronon (1995) 'The Trouble with Wilderness; or, Getting Back to the Wrong Nature', in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (London: Norton).
N. Fraser (1997) *Justice Interruptus: Critical Reflections on the "Postsocialist" Condition* (New York: Routledge).
G. Garrard (2010) 'Problems and Prospects in Ecocritical Pedagogy', *Environmental Education Research* 16:2, 232–245.
D. Gilbert (2006) 'If Only Gay Sex Caused Global Warming', *Los Angeles Times*, 2 July 2006.
A. Ingram et al. (eds) (2007) *Coming into Contact:Explorations in Ecocritical Theory and Practice* (Athens: University of Georgia Press).
H. Jenkins (2009) *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century* (Chicago: MIT Press).
A. Leopold (1987) *A Sand County Almanac, and Sketches Here and There* (New York: Oxford University Press).
P. Mathieu et al. (eds) (2006) *Writing Places* (New York: Longman).
D. Mazel (2008) 'Ecocriticism as Praxis', in *Teaching North American Environmental Literature*, ed. L. Christensen, M.C. Long, and F. Waage (New York: Modern Language Association), 37–57.
M. McCullough (2005) *Digital Ground: Architecture, Pervasive Computing, and Environmental Knowing* (Cambridge, MA: MIT Press).
T. Nordhaus and M. Shellenberger (2007) *Break Through: From the Death of Environmentalism to the Politics of Possibility* (Chicago: Houghton Mifflin Harcourt).
C. North (2006) 'More Than Words? Delving into the Substantive Meaning(s) of "Social Justice" in Education', *Review of Educational Research* 76:4, 507–535.
D. Owens (2001) *Composition and Sustainability: Teaching for a Threatened Generation* (Urbana, IL: NCTE).
J. Purdy (2010) 'The Politics of Nature: Climate Change, Environmental Law, and Democracy', *The Yale Law Journal* 119:6, 1122–1209.
J. Rawls (2001) *Justice as Fairness: A Restatement* (Cambridge, MA: Belknap Press).
R. Reich (2002) Bridging Liberalism and Multiculturalism in American Education (Chicago: University of Chicago Press).

4

Encountering Social-Constructivist Rhetoric: Teaching an Environmental Writing and Literature Course

Elizabeth Giddens

> What are we reading next time? *Not* another walk in the woods, I hope.

The student who spoke up at the end of class one day in an environmental writing and literature course took me off guard. In response, I checked the syllabus and confirmed that, why, yes, next time we were reading a great essay, one structured, uh, rather like a walk in the woods. I felt sure she would enjoy it. Plus it was a key text, I noted, defending the assignment. I no longer recall the actual piece, but it might have been Henry David Thoreau's 'Walking,' an excerpt from Annie Dillard's *Pilgrim at Tinker Creek*, or one from Bill McKibben's *End of Nature*. The class was not reading *A Walk in the Woods*, Bill Bryson's account of an attempted Appalachian Trail through-hike.

Nonetheless, she made a good point. Most of our reading was, in one way or another, about a walk in the woods, a fact that became a class joke during the remainder of the term. I am a fan of what Randall Roorda (1998) has called 'retreat narratives', but to her, these pieces had gotten to be too precious: too much musing and introspection and escape, too much of one person's internal life. Critic Dana Phillips has called such texts 'selfish' (2003, p. 195). Although my student humoured me for the rest of the semester, I heard her. She – and probably others – wanted something more complex in form, or more apparently social and political in concept, or both. A course

that, perhaps, had sounded vitally relevant to her and her classmates' daily lives when they signed up for it had become too much about aesthetes' observations and personal preferences.

The course I teach is conceived as a hybrid writing and literature course, asking students to read a sampling of environmental non-fiction; to interpret those selections as cultural artefacts situated in a specific context; to examine key metaphors/topoi of environmental writing; and to consider the authors' purposes, rhetorical strategies, research and writing processes *so that* the students can draw ideas and approaches from them as they conceptualise, plan, research and compose writing of their own. In many ways, the course aligns itself to the pedagogy of Sidney Dobrin and Christian Weisser's 'ecological literacy approach' to teaching ecocomposition (2002, p. 140) by emphasising 'awareness of the "natural" world, of the environmental crisis, of the role of human beings in the destruction of environments, and in developing sustainable ways in which to continue to live on the planet' (p. 141). Through reading, interpretation, research and writing for actual and often non-academic audiences, the course exposes students to 'the multitude of perspectives' that will 'enable them to develop mature and enduring positions of their own' (p. 142). Robert Brown and Carl Herndl have described a social-constructivist perspective as one that recognises both habitus (the local and personal factors that compose identity) and the cultural and linguistic marketplace (the voices of dominant groups in society) in strongly influencing the positions and arguments that interlocutors formulate (1996, p. 232). My student's remark revealed that my intended approach was, at the very least, inconsistently realised and, quite possibly, incoherent to students because of disconnects between theoretical descriptions of the rhetoric of environmental issues and the many 'walks in the woods' readings. This article describes how I responded in order to align the features of the course.

A social-constructivist text

Obviously, a new text was needed, one that would highlight the social nature of environmental issues, that would account for their complexity through the inclusion of multiple points of view as well as the uncertainty of some crucial information, that would demonstrate the likely need for negotiation and compromise to find solutions

to problems or resolutions to disputes. One text that meets these criteria is John McPhee's *Encounters with the Archdruid*, a tripartite book-length work that first appeared in *The New Yorker* and was published in book form in 1971. I now use this book as the first reading assignment of the course, spreading its 245 pages over two weeks. The book is a literary non-fiction account of arranged but lengthy meetings between David Brower, the executive director of the Sierra Club during the 1960s, and three formidable, even legendary, adversaries: Charles Park, an accomplished geologist and mineral engineer; Charles Fraser, the developer of the Sea Pines Plantation on Hilton Head Island, South Carolina; and Floyd Dominy, the long-time Commissioner of the US Bureau of Reclamation, which builds dams for economic development and agricultural benefit. In the first part, 'A Mountain', Brower and Park hike into the Cascades Range in Washington state to find an area subject to copper mining. Next, in 'An Island', Brower and Fraser visit Cumberland Island, a barrier island off the Georgia coast, to tour the developer's extensive land holdings there and discuss how they should be developed into a resort. In 'A River', the final part, Brower and Dominy take a motorboat tour of Lake Powell, a man-made lake in Utah and Arizona that Dominy created by damming Glen Canyon in 1963; then they join a commercial raft trip down the Colorado River through the Grand Canyon to Havasu Canyon, an area under consideration for dam construction.

Often, the book introduces students to literary non-fiction not structured as a memoir. A number of my students have remarked that they have never read anything like it before; such a comment may then be followed by a discussion of the conventions of feature writing and news reporting and how they may be combined to create a non-fiction account that reads much like a novel and presents multiple individuals and their views. Early on, it is helpful to ask students to examine the construction of one or more sections of the book so that they can see how it has been intricately organised as a blending of non-fiction sub-genres. Outlining a section shows them how the piece is put together along a conceptual and narrative thread. In addition, asking them to speculate on the research techniques that McPhee must have used, as well as the writing process he must have followed, prepares students for their own subsequent research and writing projects. Along the way, it is helpful to mention

The New Yorker's celebrated fact-checking department and to bring in secondary sources such as print and video interviews of McPhee talking about his work habits (Hayes 2004; Berkes 2006; McPhee 2010).

The adversarial concept of the book might suggest that it demonstrates 'ecospeak', M. Jimmie Killingsworth and Jacqueline S. Palmer's term for the extreme, polarised rhetoric of the environmental movement and its interlocutors (1992). No doubt, the book contains confrontations, altercations and even expressions of personal prejudice and arrogance. For example, before the raft trip, a hotheaded Dominy says of Brower, 'I like Dave Brower, but I don't think he's the sanctified conservationist that so many people think he is. I think he's a selfish preservationist, for the few. Dave Brower hates my guts. Why? Because I've *got* guts. I've tangled with Dave Brower for many years' (p. 168). For his part, Brower is a master of apocalyptic rhetoric when delivering his 'Sermon' of extreme examples and questionable statistics for land preservation across the country (pp. 79–87). But none of the relationships between the key figures function as simple antagonisms; instead, they are layered and changeable. Furthermore, McPhee exposes the limitations of Brower's strategies and appeals when he chronicles how and why the Sierra Club pushed him out as executive director because of financial recklessness, extremism and disobedience to the board (pp. 210–211). Though the narrative captures many disagreements in fact, policy and values, because the disputes occur on location and because they unfold as the principals (and others with them) explore and observe the land, it unmasks the intelligence and humanity of all the characters, instances of doubt, moments of concession and recognition of (as well as respect for) alternative and competing points of view.

Dialogue shows individuals moving through landscapes and discussing them and the broader issues that they give rise to. In a passage from the middle of the raft trip, Brower and Dominy argue about whether dams are ever or always beneficial (pp. 222–223); each admits personal bias and the complexity of the issue. The differences in personality, values and views between Brower and Dominy are revealed, but so is the reasoning that supports their views. Once a reader factors in the personal histories of the men – Brower's artistic and empathetic nature shaped from a difficult adolescence and Dominy's early struggles to irrigate the land of western US farmers – they become charming and impressive for hard-won successes. The

adversaries acknowledge the appeal of the other's opinion. One evening at a campsite, Brower and Dominy connect: Brower says, 'I'm not in favor of dams, but I am in favor of Dominy. I can see what you have meant to the Bureau, and I am worried about what is going to happen there someday without you' (p. 238). Dominy responds, 'As a matter of fact, Dave Brower, I'll make a trip with you any time, anywhere' (p. 239). In this instance, the gladiators have put down their swords; they have not changed views. But the camaraderie feels genuine, and, more importantly, the interaction between informed individuals is enlightening to readers.

The antagonists are accompanied by fellow hikers and rafters who listen to, accept and resist arguments and conclusions by the experts; this 'chorus' finds themselves seeking alternatives to Brower as well as to his sparring partners (p. 226). When Brower tells fellow rafters that Dominy wants to dam part of the Colorado and that the resulting reservoir would flood big-name rapids on their trip,

> The others look from Brower to Dominy without apparent decision. For the most part, their reactions do not seem to be automatic, either way. . . . [N]early all of them live in communities whose power and water come from the Colorado. They are, like everyone else, caught in the middle, and so they say they'll have to think about it. (pp. 226–227)

Other elements that defuse and contextualise individuals' ecospeak are McPhee's persona and his shaping of the narrative. Physically present in all the scenes, McPhee occasionally serves as moderator, questioning each principal about a given topic or asking for explanation. On rare occasions when he expresses an opinion, he highlights the social dimension of the issues at hand and notes that change and compromise are inevitable. For instance, Part 2 closes with lyrical regret:

> In the battle for Cumberland Island, there could be human winners here or there, but – no matter what might happen – there could be no victory for Cumberland Island. The Frasers of the world might create their blended landscapes, the Park Service its Yosemites. Either way, or both ways, no one was ever to be as free on that wild beach in the future as we had been on that day. (p. 150)

McPhee tells us that humans and their ideas inevitably control the fates of these places.

Though the book unpacks three issues (whether to mine, to build or to dam), only one is resolved within the narrative: readers learn that Fraser was forced to sell his land on Cumberland Island to the National Park Service when environmental groups, 'druids in massed phalanx', protested his development plan (p. 149). But readers do not know whether copper mining was allowed in the Cascades or a dam was built in the Grand Canyon. (To date, neither project has occurred, outcomes that my students invariably ask about.) That the narrative ends before conclusions to these episodes can be told lends immediacy and uncertainty to the questions they raise. Readers can consider how they would fashion compromises when all stakeholders have valid, sympathetic points to make.

More important, the book suggests that an anthropocentric perspective becomes a default view for most human stakeholders in the consideration of contingent environmental issues. Students also see how respect for all stakeholders, whether human or not, is necessary to work out compromises even though the process is social in nature and largely depends on cultural values. They notice that decisions often go forward with incomplete knowledge about consequences, and they observe the power of money and of public opinion at play in the disputes. *Encounters*, I think, has been popular with students because it sets them inside discussions.

After students complete *Encounters*, they read a selection of prominent environmental writers from Thoreau to contemporary authors such as Terry Tempest Williams, E.O. Wilson and Michael Pollan, sequenced chronologically and grouped loosely by subgenres such as nature writing, polemic, science writing, feature writing and travel writing. Remarkably, since the course redesign, no one has complained about 'walks in the woods' essays, even though I continue to assign some. The McPhee text provides a primer on topics and typical positions that arise in subsequent readings.

Alternative social-constructivist texts

Other texts may work as well as *Encounters* to open a course and establish a social-constructivist approach. A few that offer similar experiences are Janisse Ray's *Ecology of a Cracker Childhood* about the

long-leaf pine ecosystem in the US Southeast, Scott Weidensaul's *The Ghost with Trembling Wings: Science, Wishful Thinking, and the Search for Lost Species* and Barry Lopez's long feature article 'A Presentation of Whales' about a 1979 beaching of 41 sperm whales on the Oregon coast. The same effect may be gained by a casebook approach, reading a set of authors who represent different stances, experience and expertise on one topic. An obvious group is Muir, Pinchot and Roosevelt on the Hetch Hetchy debate. Also amenable to a casebook are Rachel Carson (2002), her adversaries in the chemical industry, her defenders, and contemporary press reports about the environmental effects of DDT and other pesticides. Any other watershed event or publication and the swirl of writing around it would also work. The 2010 Gulf oil spill invites consideration as well: *Unspoiled: Writers Speak for Florida's Coast* might serve as an anchor text for this idea.

Avoiding controversy in favour of developing knowledge and understanding over the long term may be an attractive casebook plan as well. A topic such as the Everglades that spans decades may highlight how private citizens, business interests, activist groups and policymakers modify their views over time and search for accommodations, if not common ground. For this topic, students might begin by reading Marjory Stoneman Douglas' *The Everglades: River of Grass* (2007), first published in 1947, and follow the area's post-World War II history through the establishment of the national park and the recent efforts to restore the Everglades after decades of agricultural exploitation and explosive development.

Like *Encounters*, these alternatives shift the emphasis away from one individual's experience and personal perspective toward study of a social rhetorical process in which many may participate. More simply, the less dogmatic teachers are in presenting environmental issues, books, histories, ideas and options to students, the more students feel empowered to think through issues for themselves and, perhaps, to act to affect them.

A community engagement writing project

After students have read and discussed most of the primary texts, I want them to reflect more broadly on how (local, national and international) culture plays a role in the ways people view the non-human

world, environmental problems and individuals' participation in public discussions and policy debates. At this point, the class reads Greg Garrard's *Ecocriticism*, to gain a critical orientation towards previous readings and towards their own interests and likely research topics. As writers, students benefit from ecocritical theory by attending to the resonance of their diction when using key terms such as wilderness and their synonyms, and by anticipating default reactions readers have to certain kinds of arguments. As they plan and draft, students consider how they want to be perceived by readers, and they are likely to think that they want to be read and heard, if not heeded, by those who are sceptical and those who may resist their views.

While studying theory, students embark on the major writing project of the course, which is designed to encourage them to research a topic (not necessarily a controversy) thoroughly from a local angle and then to write a piece of at least 800 words.[1] This assignment requires both library and journalistic research (interviews, observations, experiential learning) and several graded intermediate assignments during the research period itself: a topic proposal memo; an annotated bibliography; an issue diagram; a plan for field research including interview questions and specific goals and dates for all field activity; and, finally, interview transcripts and/or field notes. The issue diagram, in particular, draws students' attention to the social and cultural dimensions of their topics. It includes all known stakeholders and their positions; as they construct it and respond to my comments, the diagram helps students identify stakeholders with whom they are unfamiliar. In this way, the diagram spurs additional, targeted research and cautions students against over-generalising about what marginalised parties think or why they think the way they do.

Until they have become truly familiar with their topics, I do not ask students to declare what sort of piece they want to produce because I want their ideas for the product to be informed by extensive research and because I want them to adapt their writing plans to the exigencies of the topic. For example, they need to learn the status of their issue and what the public or interest groups need to know or do about it at this time (that is, accounting for *stasis* and *kairos*). With five weeks remaining in the semester, students submit a second, detailed memo proposing the final focus and genre of their project. They may choose any genre, but they must identify an actual

audience and a relevant venue for publication (print, electronic, audio or oral). These genres include, but are not limited to: a memoir, a set of journal entries; guest columns for a newspaper; a feature story, either with or without a deliberative point; a graphic story, a documentary film; a website; or a formal public presentation. Next they produce a detailed outline or early draft and then a complete draft, sharing these during peer-review sessions. At the end of the term, students hand in final documents and present their work to the whole class.

Typically, students find topics they genuinely care about and conduct enough research to write from an informed perspective. If they choose to argue for a particular view or action, they well know the likely counter-arguments and the identity of those who voice them. If they choose to focus on a more personal and expressive genre, their experience of the topic is enriched by their deep knowledge of it. In past semesters, students have written on the following topics:

- The history of the Cossawattee River in north Georgia, and how, ironically, damming it led to a revitalisation
- The crisis of grey bats dying from white-nosed syndrome in eastern US caves
- How locally grown foods could be served in the university cafeteria
- The state's water crisis and political and personal responses to it
- How guidelines for green buildings are best adapted to Georgia's hot and humid climate.

These topics enable students to make connections between their studies, personal interests and communities; consequently, their work can be meaningful beyond the course and semester. Further, they can begin to experience how their writing can become part of a social discussion of current concerns. I invite students to participate in the university's annual undergraduate research symposium by reading their work aloud or showing their films or presentations; similarly, some students have submitted projects for publication to the campus newspaper and the literary journal. I plan to establish a searchable website for students' projects through my university's library. Though some students are reluctant to step beyond the classroom, others feel ready to share their work.

Students tell me that this assignment pushes them to produce their strongest writing; it challenges some significantly. A few are reluctant to do field research, especially interviews. Others become bogged down by the weeks devoted to the assignment. Students may become uncertain about the genre they adopt and revert to a term-paper genre. These potential pitfalls can be ameliorated by coaching and by exposing students to professional writers' practices and struggles on similar tasks. Once again, McPhee becomes a valuable resource through interviews in which he discusses his writing process. In a long *Paris Review* interview, McPhee recounts a routine full of effort and false starts (2010, p. 61). Such descriptions reassure students about the work essential to effective writing. In addition, some of McPhee's strategies for organising material, writing leads and revising can be directly helpful: he recopies notes, then codes them, and then works on a lead and overall structure. More than anything, McPhee's honesty and humility about his process illuminate how professional writing happens.[2] Even when students' projects do not live up to their promise, the knowledge students gain from their research and from the experience of writing something that might really be read and might really matter is entirely worth the risk of an assignment that may prove too elaborate for some.

This course plan offers students a model for texts that emphasise the social nature of discussions about environmental issues. SueEllen Campbell encourages teachers to direct students' attention to the 'cultural work done by texts' and 'the conversations that develop in communities of writers, books, and readers' (2008, p. 220). By linking such discussions of readings to students' own productions for their own communities, however they define them, we can help them become participants as well as thoughtful citizens. Furthermore, scholars and researchers have found that dogmatic, guilt-laced or heavy-handed strategies for improving environmental awareness and literacy are less effective than those that inform, promote an individual sense of stewardship, and help people make personal connections between abstract concepts and their daily lives (Plevin 1997, p. 137; Biodiversity Project 1998, p. 74; Karis 2000, p. 233; Moser 2007, p. 71). In my effort to teach in concert with these lessons, I try to enable students to find topics near to home which they care about and in which they choose to become involved, as community members, volunteers and perhaps as activists. Even more broadly,

I hope the class experience is quietly, indirectly transformative, leading them toward a high level of environmental literacy as defined by the National Environmental Education and Training Foundation: one where they have and continue to develop a deep understanding of natural processes, an awareness of the human behaviours that affect these processes and an affinity for protecting or appreciating nature (Coyle 2005, pp. xiii–xiv).

Notes

1. Though this minimum length is short, many students greatly exceed it in their final projects. I have found that motivating students to write long pieces is less important than motivating them to write well-conceived ones. The length of a project is not a requirement that I want them to worry about, so I make it easy to meet.
2. The *Paris Review* interview contains details about the story behind McPhee's writing *Encounters*, so it is doubly useful.

Works cited

H. Berkes (2006) 'John McPhee: A Reporter's Reporter', http://www.npr.org/templates/story/story.php?storyId=5508293, accessed 27 May 2010.

Biodiversity Project (1998) *Engaging the Public on Biodiversity: A Road Map for Education and Communication Strategies* (Madison, WI: The Biodiversity Project).

R.L. Brown and C.G. Herndl (1996) 'Beyond the Realm of Reason: Understanding the Extreme Environmental Rhetoric of the John Birch Society', in *Green Culture: Environmental Rhetoric in Contemporary America*, ed. C.G. Herndl and S.C. Brown (Madison: University of Wisconsin Press), 213–235.

B. Bryson (1998) *A Walk in the Woods: Rediscovering America on the Appalachian Trail* (New York: Broadway).

S. Campbell (2008) 'Asking Ecocritical Questions', in *Teaching North American Environmental Literature*, ed. L. Christensen, M.C. Long and F. Waage (New York: Modern Language Association).

R. Carson ([1962] 2002) *Silent Spring* (40th Anniversary edn) (Boston: Houghton Mifflin).

S. Cerulean, J. Ray, and A.J. Wohlpart (eds) (2010) *Unspoiled: Writers Speak for Florida's Coast* (Fort Myers, FL: Red Hills Writers Project).

K. Coyle (2005) *Environmental Literacy in America: What Ten Years of NEETF/Roper Research and Related Studies Say about Environmental Literacy in the U.S.* (Washington, DC: National Environmental Education and Training Foundation).

A. Dillard (1974) *Pilgrim at Tinker Creek*. New York: Harper's Magazine Press.

S.I. Dobrin and C.R. Weisser (2002) *Natural Discourse: Toward Ecocomposition* (Albany: State University of New York Press).
M.S. Douglas ([1947] 2007) *The Everglades: River of Grass* (60th Anniversary edn) (Sarasota, FL: Pineapple Press).
G. Garrard (2004). *Ecocriticism* (New York: Routledge).
J. Hayes (2004) ' "Ideas Stream By": An Interview with John McPhee', *Writing on the Edge* 14:2, 111–124.
B. Karis (2000) 'Rhetoric, Habermas, and the Adirondack Park: An Exemplum for Rhetoricians', in *Technical Communication, Deliberative Rhetoric, and Environmental Discourse: Connections and Directions*, ed. N.W. Coppola and B. Karis (Stamford, CT: Ablex Publishing), 225–234.
M.J. Killingsworth and J.S. Palmer (1992) *Ecospeak: Rhetoric and Environmental Politics in America* (Carbondale: Southern Illinois University Press).
B. Lopez (2008) 'A Presentation of Whales', in *American Earth: Environmental Writing Since Thoreau*, ed. B. McKibben (New York: Library of America), 696–715.
B. McKibben (1989) *The End of Nature* (New York: Random House).
J. McPhee (1971) *Encounters with the Archdruid* (New York: Farrar, Straus and Giroux).
——(2010) 'The Art of Nonfiction No. 3', *The Paris Review* 192, 39–77.
S.C. Moser (2007) 'More Bad News: The Risk of Neglecting Emotional Responses to Climate Change Information', in *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change*, ed. S.C. Moser and L. Dilling (Cambridge: Cambridge University Press), 64–80.
D. Phillips (2003) *The Truth of Ecology: Nature, Culture, and Literature in America* (Oxford: Oxford University Press).
A. Plevin (1997) 'Green Guilt: An Effective Rhetoric or Rhetoric in Transition?', *Technical Communication Quarterly* 6:2, 125–140.
J. Ray (1999) *Ecology of a Cracker Childhood* (Minneapolis: Milkweed Editions).
R. Roorda (1998) *Dramas of Solitude: Narratives of Retreat in American Nature Writing* (Albany: State University of New York Press).
H.D. Thoreau and H. David (2002) 'Walking', in *Norton Book of Nature Writing*, ed. R. Finch and J. Elder (New York: Norton), 180–205.
S. Weidensaul (2002) *The Ghost with Trembling Wings: Science, Wishful Thinking, and the Search for Lost Species* (New York: North Point Press).

5
Teaching Romantic Ecology in Northern Canada

Kevin Hutchings

Since the publication of Jonathan Bate's *Romantic Ecology* in 1991, scholars have increasingly sought to reframe British Romanticism in light of environmental history, creating in the process the field of inquiry known as 'Green Romanticism' or 'Romantic Ecology'. Exploring trends in this field,[1] I have developed an undergraduate seminar at the University of Northern British Columbia that encourages students to consider, from an ecocritical perspective, Romantic-era responses to such topics as Enlightenment science and natural history, urbanisation and industrialisation, conservation, environmental ethics and animal welfare. During our 13-week semester, the class addresses a number of overarching questions: does Romanticism provide an ethical alternative to traditional anthropocentric concepts of nature, or is the literature's emphasis upon imagination itself thoroughly human-centred? How do the Romantics' generic experiments inform their responses to nature? What are the environmental implications of aesthetic categories like the sublime, the beautiful and the picturesque? How do Romantic concepts of nature engage with hegemonic models of gender, race and class? By asking such questions, I aim to help my students appreciate Romanticism's contributions to environmental history and to understand some of the ways in which Romantic thought continues to inform modern-day environmentalist theory and practice.

I begin my course by emphasising the perils of anachronism; after all, the term 'ecology' was not coined until 1869, and, unlike Romantic-era natural philosophy, ecological science follows a *post*-Darwinian paradigm. In an introductory lecture I therefore

distinguish between the modern-day concept of ecology and the eighteenth-century concept of 'nature's economy' to which the Romantics were indebted; for although both paradigms emphasise the interconnection of all things, the former is based on an empirical, and the latter on a largely providential, understanding of nature's processes (see Worster 1994; McKusick 2000, pp. 35–41; Hutchings 2002a, pp. 25–36, 90–102). I also think it important to acknowledge the modern-day environmentalist critique of Romanticism's idealising and sentimentalising tendencies, as evident in an iconic lyric like Wordsworth's 'I wandered lonely as a cloud'. Since, in the 'real' world, clouds are not 'lonely' and daffodils are not 'jocund' or full of 'glee', the poem's pathetic fallacies reveal more about the 'I' in its title than they do about the more-than-human world. Given this subjective ethos, I encourage my students to question the very idea that the Romantics were 'green' (Pite 1996).

There is, however, much more to Romanticism than my cursory reading of Wordsworth's poem would suggest. During the past several decades, the pre-eminence of the so-called 'Big Six' male Romantic poets – Wordsworth, Coleridge, Blake, Byron, Shelley and Keats – has been productively called into question, and the resultant reframing of the Romantic canon has reclaimed for study a much more diverse range of texts, while also challenging the primacy of the lyric as Romanticism's pre-eminent literary form. Below, therefore, I suggest some approaches to teaching that might help instructors to appreciate some of the ways in which Romanticism has informed the historical development of ecological consciousness and environmental activism. Given the prominence of environmental issues in today's media, teaching Romanticism from an ecocritical perspective can help to bring a sense of topical relevance – and thus renewed vitality – to a 'traditional' subject area students often find less than appealing.

An effective way to engage students early in the course is to involve them in a group discussion highlighting links between Romanticism and modern-day environmentalism. Towards this end, we consider how some of the Romantic poets' favourite literary modes inform one of the urtexts of twentieth-century environmentalism: Rachel Carson's *Silent Spring* (1962), a work of biological science that begins with an elegant *literary* preface entitled 'A Fable for Tomorrow'. After discussing the role Carson's book played in the US's legislated

banning of DDT and the creation of a grassroots environmentalist movement (Lear 2002, pp. x–xix), I read her brief 'Fable' aloud, asking students to identify the literary modes she deploys therein. Noticing her idealisation of a rural America in which 'all life seemed to live in harmony with its surroundings' (Carson 1962, p. 1), students are quick to identify Carson's opening two paragraphs as pastoral, and a discussion of this mode inevitably ensues.

After comparing Carson's pastoral nostalgia to similar tendencies found in, say, Wordsworth's 'Lines Composed a Few Miles above Tintern Abbey', we discuss other literary modes present in her 'Fable'. Students already familiar with Romanticism are generally able to identify Carson's use of a secularised prophetic mode, because her warning about the disastrous consequences of toxic pesticide usage (pp. 2–3) conforms nicely to Blake's definition of prophecy as a mode of utterance that warns 'If you go on So,/The result is So' (Blake 1988, p. 617). Because much current news makes the global ecological crisis seem depressingly intractable, I also distinguish between prophetic and apocalyptic modes: whereas apocalypse traditionally forecasts inevitable doom, prophecy – as Blake's definition indicates – leaves room for human agency, thereby implying that we can work to create alternative futures (see Hutchings 2002b on prophecy and Garrard 2004 on apocalyptic rhetoric). By comparing Romantic forms to those deployed in a modern-day text like *Silent Spring*, I aim to illuminate continuities between older and newer forms of environmental writing, continuities that help students to appreciate the continuing relevance of Romantic poetics.

The syllabus

After my introductory classes, I divide the course into several thematically organised modules. Entitled 'Theory, History, Practice', the first module considers Green Romanticism's key critical and historical contexts. I begin by discussing the sometimes rancorous debates that shaped Romantic ecocriticism in the early 1990s. Particularly useful is the introduction to *Romantic Ecology*, where Bate articulates his contentious thesis that, in light of environmental crisis, Romanticists must move 'from red to green' by rejecting the Marxist and New Historicist approaches developed by Jerome McGann and Alan Liu, approaches emphasising the discursive construction of

nature in Romantic writing (1991, pp. 8–9). Although Bate's dismissal of constructivist models tends to polarise class discussion – with theory-oriented students rejecting his argument as facile and others supporting it as commonsensical – it facilitates the production of a heuristic debate that helps students to understand the critical issues while acquiring a sense of Green Romanticism's history as a critical practice. As a counterweight to Bate's polemic, I also ask my students to consider the introductory sections of *Green Writing* (2000), wherein James McKusick advocates the need to engage dialectically with *both* constructivist and materialist perspectives rather than rejecting one in favour of the other (pp. 15–17) – an argument my students generally find more attractive than choosing sides in an 'either/or' debate.

Further contextualising these debates between 'nature-as-ground and nature-as-construct' (McKusick 2000, p. 16), the class considers some of the ways in which Romantic-era writers themselves valued materialist versus textual approaches to the understanding of nature. Here I find it productive to compare Mary Wollstonecraft's essay 'On Poetry and Our Relish for the Beauties of Nature' (1797) with Wordsworth's companion poems 'Expostulation and Reply' and 'The Tables Turned' (1798), for each of these texts presents an argument favouring direct empirical experience of nature over book learning and textual representation. I also find it useful to compare key passages from Wollstonecraft's *Vindication of the Rights of Woman* (1792) and Wordsworth's preface to *Lyrical Ballads* (1802), both of which criticise social artifice – Wollstonecraft by arguing that women's social roles are artificial constructs of patriarchal culture, and Wordsworth by arguing that 'the common man' is a more 'natural' being than members of the upper classes. By comparing Wollstonecraft's and Wordsworth's writings, students begin to appreciate some of the ways in which contemporary writers used the concept of 'nature' to challenge or to regulate modes of human being and behaviour based on differences in gender and class.

In the next module, we investigate 'Pastoral Poetics' beginning with close readings of poems like John Clare's 'Pastoral Poesy', Wordsworth's 'Tintern Abbey' and Coleridge's 'The Eolian Harp' and 'This Lime Tree Bower My Prison'. My students often wax sceptical during this module, for the ways in which these poems idealise nature as a benevolent source of moral virtue do not speak to

their own experiences living in a relatively remote region of British Columbia where winter storms, spring floods and summer forest fires – not to mention the occasional presence of potentially aggressive bears or moose on campus – can threaten life and limb. Sceptical, like Timothy Morton, of any tendency to believe that 'the deepest ecological experience' is 'full of love and light' (Morton 2007, p. 198), my students often enjoy anti-pastoral poems like Anna Barbauld's 'To Mr. C', wherein the speaker chastises Coleridge for slumbering in a bucolic fantasy rather than moving onward up 'the hill of science' (line 1); and they are fascinated by selections from Blake's anti-pastoral 'Songs of Experience', wherein nature is depicted as a site of potential violence in which deadly predators threaten to devour pastoral lambs ('The Tyger') and parasitical worms destroy beautiful flowers ('The Sick Rose').

In the course's third module, entitled 'Natural Philosophy and Natural History', we expand our investigation of Romantic pastoral by considering Charlotte Smith's *Beachy Head* (1807). Depicting shepherds engaged in piracy and the running of contraband – circumstances 'all unlike the poet's fabling dreams' of Arcadia (line 185) – Smith's poem provides a nice antidote to pastoral representations idealising life in rural nature. *Beachy Head* is all the more interesting because it features numerous discussions of natural history. Despite appealing to 'Omnipotent' deity (line 6), the poem considers Britain's geological make-up (lines 1–10) and the fossilised remains of 'bivalves, and inwreathed volutes' (line 380), implicitly challenging anthropocentric concepts of human identity by locating our origins within an aeons-old history of the natural world. To enrich discussion of Smith's poem, I also assign excerpts from such scientific works as Erasmus Darwin's *The Temple of Nature* (1803) and Charles Lyell's *Principles of Geology* (1830–33), both of which also consider the material and biological origins of earthly life. Studied in concert, these texts help students to challenge common stereotypes of Romantic literature as anti-rational and anti-scientific.

These discussions of natural history segue nicely into a module on 'Romanticism and Science'. Here I have often assigned Mary Shelley's *Frankenstein* because it provides an opportunity to investigate the ethical dimensions of contemporary scientific practice. Noting that the ability to be moved by nature's beauty and sublimity was often considered an index of moral integrity during the Romantic period, I ask

my students what we should make of the fact that Victor's scientific work deadens his aesthetic responses, making him 'insensible to the charms of nature' (1994, p. 83). Other questions are also pertinent: in what ways does Shelley's critique of a scientific method whose male practitioners 'penetrate into the recesses of nature, and shew how she works in her hiding places' (p. 76) anticipate ecofeminist arguments identifying parallels between the oppression of women and nature (Merchant 1980, pp. 164–191)? Can one justify a scientific practice that 'torture[s] the living animal' (p. 83), even if it benefits humans by reducing disease? By engaging such questions, students come to appreciate the ways in which Shelley's novel anticipates modern-day issues. *Frankenstein* can productively inform classroom debates about the ethical dimensions of such things as the genetic modification of organisms, the production of so-called 'Frankenfoods' and the development of modern reproductive technologies. Because Shelley's luridly Gothic representations of science are in many ways problematic, however, I like to close the module by drawing attention to Luc Ferry's scathing critique of the Frankenstein myth – and of Romanticism's anti-scientific and anti-technological tendencies – in *The New Ecological Order* (1995, pp. 76–82).

Beginning with Gilbert White's bioregionalist treatise *The Natural History of Selborne* (1788–89), the next module examines 'Habitats, Animals, and the Rights of Nature'. While White focuses primarily on Selborne's aesthetically pleasing bird and animal species, he nevertheless challenges big-species chauvinism by arguing that the 'most insignificant insects and reptiles are of much more consequence, and have much more influence in the œconomy of nature, than the incurious are aware of' (Letter XXXV, 1987, p. 196). And while he often shoots wild creatures in order to gain anatomical knowledge through their dissection, he condemns 'unreasonable sportsmen' whose wanton hunting practices threaten local species with extinction (Letter VI, p. 21). Citing Wordsworth's indictment of an atomistic mode of analysis that 'murder[s] to dissect' ('The Tables Turned', line 28), instructors can draw on *Selborne* to encourage classroom debates about animal rights and environmental ethics. In my own teaching, I have found that students who embrace anti-hunting positions will argue passionately against White's 'shotgun naturalism', seeing it as incompatible with his conservationist impulses, while students sympathetic to hunting will often identify White as a forerunner of

modern-day conservationist hunting groups like Ducks Unlimited or the Federation of Associations for Hunting and Conservation of the EU (FACE).

Our discussions of *Selborne* provide helpful contexts for subsequent classes exploring Romantic responses to birds and animals. Poems like Coleridge's 'The Rime of the Ancient Mariner', Blake's 'Auguries of Innocence', Burns' 'To a Mouse' and Barbauld's 'The Mouse's Petition' can be productively considered against the background of Romantic-era animal welfare activism, which led to the creation of Britain's first Society for the Prevention of Cruelty to Animals in 1824 (see Kenyon-Jones 2001; Perkins 2003). By approaching each text with the question 'Is there an animal in this poem?', instructors can help students distinguish between an instrumentalist poetics, in which animals are made to serve what Henry Fuseli called 'emblematic Purposes' (Bentley 1969, p. 170), and an alternative poetics representing animals in terms of their otherness, intrinsic value or ecological relationships with other organisms. A comparative examination of various Romantic bird poems – including Coleridge's 'The Nightingale', Clare's 'The Nightingale's Nest', Keats' 'Ode to a Nightingale' and Shelley's 'To a Skylark' – can also help students to ponder distinctions between anthropocentric and ecocentric poetics (see Garrard 1998). Before addressing these poems in class, I like to quote the American nature writer John Burroughs, who in *Birds and Poets* (1877) complained that although many 'birds have been game for the poetic muse . . . in most cases the poets have had [in mind] some moral or pretty conceit and have not loved the bird first' (p. 45). Inquiring whether or not Romantic poets are guilty of such anthropomorphism, class discussions can lead not only to productive readings of the poems themselves but also to the pondering of what it might mean for a poet to 'love the bird' – or any non-human creature – 'first'.

For the final module, I like to choose a text that engages a broad array of provocative environmental concerns. Dealing with issues surrounding weapons of mass destruction, international warfare, pandemic disease and global apocalypse, Mary Shelley's *The Last Man* (1826) can evoke stimulating classroom discussion. The novel's critique of pastoral utopianism also helps to round out the course by enabling us to reframe problems of pastoral poetics examined in earlier modules. I have also organised the final module around Anna

Brownell Jameson's travelogue *Winter Studies and Summer Rambles in Canada* (1838), a text recounting her transatlantic tour of Upper Canada's backwoods with a copy of Wordsworth's poetry on hand. Investigating Jameson's engagement with Wordsworth, and juxtaposing her descriptions of settings like Niagara Falls against selected passages from Edmund Burke's *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1757), the class explores some of the ways in which European paradigms informed colonial responses to North American ecosystems. Because Jameson quotes lines from Wordsworth's description, in *The Excursion*, of Native Americans as 'Primeval Nature's Child[ren]' (1990, pp. 309–310), a discussion of her book's ethnography can also illuminate the figure of 'The Ecological Indian', which 'has drawn persistently on . . . romantic associations' (Krech 1999, p. 16; Hutchings 2002a, pp. 155–159).

Assignments

Since environmental concerns can profoundly affect students who follow current events, I like to assign a set of four brief 'response papers' that allow students to engage with course texts on a 'personal' level. While inviting personal perspectives can be risky, such assignments improve class discussion by helping students to 'own' the assigned readings. Moreover, by encouraging students to make connections between Romantic-period texts – the concerns of which are themselves often subjective in character – and their own present-day experiences, these assignments can help them to understand that certain strains of modern-day environmentalism are themselves 'Romantic' in character. These assignments are balanced, ultimately, by the more 'objective' demands of the term research paper, where students are required to engage with course materials in a more rigorous and scholarly manner.

In addition to the response papers, I also assign brief seminar presentations focusing on texts assigned for the given class day. To spice up these presentations, I encourage students to make judicious use of audiovisual aids such as DVDs, digital audio files, Powerpoint and the World Wide Web. In a seminar on the pastoral, for example, one student showed and discussed a brief clip from Sally Bushell's film *Wordsworth's Sense of Place*, which helped her classmates – most of whom had never experienced English landscapes – to appreciate the

topographies about which Wordsworth wrote. Another student, presenting on two nightingale poems, showed Powerpoint images of the bird (which is not native to our region) and played an audio file of its song downloaded from the Internet. Yet another student, presenting on 'The Eolian Harp' – an instrument with which few students are nowadays familiar – played an audio file of a wind harp's haunting song. In classes on Blake's *Songs of Innocence and of Experience*, students have shown designs from the online *William Blake Archive* as a means to highlight the interrelationship between Blake's words and images. In preparing their essays, some students made use of such online materials as Ashton Nichols' *Natural History* website, James C. McKusick's online edited collection *Romanticism and Ecology* and materials from the *John Clare Homepage*.[2] If the British Romantics were, as the stereotype claims, opposed to technology, students studying their work in the twenty-first century need not be. Far from detracting from the reading experience, such virtual resources can be enriching – especially for students who have never visited the places in which the Romantics lived and worked.

Notes

1. For an introduction to Green Romanticism, see Hutchings (2007). Unless otherwise noted, primary texts cited herein are available in Greenblatt et al. (2006); or in Mellor and Matlak (1996).
2. See *The William Blake Archive* at http://www.blakearchive.org; McKusick (2001), http://www.rc.umd.edu/praxis/ecology; Ashton Nichols's *Romantic Natural History*, http://users.dickinson.edu/~nicholsa/Romnat/romnat1.htm; and the *John Clare Homepage*, http://www.johnclare.info/default.html.

Works cited

A. Barbauld (1994) 'To Mr. [S.T.] C[oleridge]', in *Women Romantic Poets, 1785–1832*, ed. J. Breen (London: Everyman), 84–85.

J. Bate (1991) *Romantic Ecology: Wordsworth and the Environmental Tradition* (London: Routledge).

G.E. Bentley Jr. (1969) *Blake Records* (Oxford: Clarendon).

W. Blake (1988) *The Complete Poetry and Prose of William Blake*, ed. D.V. Erdman (rev. edn) (New York: Anchor Books).

E. Burke ([1757] 1990) *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*, ed. A. Phillips (Oxford: Oxford University Press).

J. Burroughs (1877) *Birds and Poets* (New York: Hurd and Houghton).
S. Bushell (n.d.) *Wordsworth's Sense of Place: Home at Grasmere* (Lancaster: Lancaster University).
R. Carson ([1962] 2002) *Silent Spring* (Boston: Houghton Mifflin).
L. Ferry (1995) *The New Ecological Order*, trans. C. Volk (Chicago: University of Chicago Press).
G. Garrard (1998) 'The Romantics' View of Nature', in *Spirit of the Environment: Religion, Value, and Environmental Concern*, ed. D.E. Cooper and J.A. Palmer (London: Routledge), 113–130.
———(2004) *Ecocriticism* (London: Routledge).
S. Greenblatt et al. (eds) (2006) *The Norton Anthology of English Literature: The Romantic Period* (8th edn) Vol. D (New York: Norton).
K. Hutchings (2002a) *Imagining Nature: Blake's Environmental Poetics* (Montreal: McGill-Queen's University Press).
———(2002b) 'The Modal Roots of Environmentalism', *Genre* 35:1, 1–24.
———(2007) 'Ecocriticism in British Romantic Studies', *Literature Compass* 4:1, 172–202.
A.B. Jameson ([1838] 1990) *Winter Studies and Summer Rambles in Canada* (Toronto: McClelland and Stewart).
C. Kenyon-Jones (2001) *Kindred Brutes: Animals in Romantic Period Writing* (Aldershot: Ashgate).
S. Krech III (1999) *The Ecological Indian* (New York: Norton).
L. Lear ([1962] 2002) Introduction to *Silent Spring* (Boston: Houghton Mifflin), x–xix.
J.C. McKusick (2000) *Green Writing: Romanticism and Ecology* (New York: St. Martin's Press).
J.C. McKusick (ed.) (2001) *Romanticism & Ecology*. Romantic Circles Praxis Series (College Park: University of Maryland Press).
A.K. Mellor and R.E. Matlak (eds) (1996) *British Literature 1780–1830* (Fort Worth: Harcourt).
C. Merchant (1980) *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco: Harper).
T. Morton (2007) *Ecology without Nature: Rethinking Environmental Aesthetics* (Cambridge, MA: Harvard University Press).
D. Perkins (2003) *Romanticism and Animal Rights* (Cambridge: Cambridge University Press).
R. Pite (1996) 'How Green Were the Romantics?', *Studies in Romanticism* 35:3, 357–373.
M. Shelley ([1818] 1994) *Frankenstein; or, The Modern Prometheus*, ed. D.L. Macdonald and K. Scherf (Peterborough, ON: Broadview).
———([1826] 1994) *The Last Man*, ed. M.D. Paley (New York: Oxford University Press).
C. Smith ([1807] 1996) *Beachy Head*, in *British Literature 1780–1830*, ed. A.K. Mellor and R.E. Matlak (Fort Worth: Harcourt Brace), 244–256.
G. White ([1788–9] 1987) *The Natural History of Selborne* (London: Penguin).

M. Wollstonecraft ([1797] 2001) 'On Poetry and Our Relish for the Beauties of Nature', in *Literature and Nature: Four Centuries of Nature Writing*, ed. B. Keegan and J.C. McKusick (Upper Saddle River, NJ: Prentice Hall), 418–421.

D. Worster ([1977] 1994) *Nature's Economy: A History of Ecological Ideas* (2nd edn) (Cambridge: Cambridge University Press).

6
Teaching the Postcolonial/ Ecocritical Dialogue

Erin James

Postcolonial ecocriticism is fast establishing itself as a major dialogue of contemporary literary studies. Lawrence Buell's *The Future of Environmental Criticism* (2005) observes the emergence of a 'second wave' of ecocriticism that pushes the parameters of conventional ecocriticism, which he sees as largely focused on American and British nature writing. This second wave, Buell argues, is critical of scientific metanarrative, open to constructivist approaches to literature, interested in rural and urban natures, and concerned with issues of race, class, gender and environmental justice. Buell's observations of a second-wave approach are no doubt in part inspired by the emergence of ecocritical readings of postcolonial literatures, as well as an interest in environmental issues by postcolonial scholars and activists such as Ramachandra Guha, Vandana Shiva, Arundhati Roy and Ken Saro-Wiwa, among others.[1] Since Buell's observation, ecocritical readings of postcolonial literatures have bloomed, most notably in the *Caribbean Literature and the Environment* collection, and special editions of academic journals, including *ISLE* (14.1), the *Journal of Commonwealth and Postcolonial Literatures* (55.3) and *New Formations* (64). The pairing of an ecocritical interest in the environment with postcolonial concerns with culture, language and representation promise to push the parameters of each discourse in new and exciting ways.

Despite the potential of a postcolonial ecocritical dialogue, however, pairing the two fields raises significant challenges. In 'Environmentalism and Postcolonialism', Rob Nixon highlights four key schisms between the two discourses (2005, p. 235).

While postcolonialists tend to emphasise hybridity and cross-culturalisation, ecocritics have favoured discourses of purity, such as narratives of virgin forests or images of untouched wilderness. While postcolonialists often concern themselves with displacement, ecocritics tend to seek out literature of place. While postcolonialists have placed value on the cosmopolitan and the transnational, ecocriticism's origins lie largely in a national, American framework. While postcolonialists have worked to excavate or reimagine the lost marginalised past, ecocritics have leaned towards the pursuit of a timeless, solitary moment of commune with nature. To Nixon's four schisms we can add a fifth and sixth: postcolonial scholars tend to be influenced by literary theory, whereas much first-wave ecocriticism was produced in reaction against poststructuralist ideas, and ecocritical pedagogy often takes a place-based approach that relies on visits to the environments students read about – a task difficult to replicate in the teaching of most postcolonial literatures.

I set out to explore these methodological and pedagogical challenges in 'The Postcolonial Ecocritical Dialogue', a graduate-level course offered at the University of Nevada, Reno. The course was designed to attract a wide variety of students and enrolled MA- and PhD-level students with a range of experience and interest levels, coming to terms with and attempting to contribute to a dialogue between postcolonialism and ecocriticism via readings of theoretical texts and postcolonial novels. In what follows, I outline the progression of the course, and detail key assignments and approaches designed to help students both appreciate and overcome these challenges.

Exploring the dialogue

As this course is rooted in the idea of dialogue, I began with an exploration of postcolonialism and ecocriticism as two distinct discourses. The demanding first unit of the seminar was dominated by theoretical readings and structured to develop the background and vocabulary necessary for understanding the complexities of a postcolonial ecocritical dialogue. Since the seminar attracted a wide variety of students, I assumed little or no experience with each discourse when designing the opening section. That said, the time restrictions of a semester-long graduate seminar made it impossible

fully to cover postcolonialism and ecocriticism, let alone encourage students to pair the fields in readings of contemporary literature from around the world. Thus, this first section was designed with a heavy editing hand to identify key postcolonial questions and illustrate the development of an ecocriticism interested in such questions. Reading started on the ground floor, intentionally simplifying and – admittedly – even stereotyping postcolonial and ecocritical approaches for a theoretical crash course.

It is helpful to pair theoretical readings with canonical novels to encourage students to not only encounter postcolonial and ecocritical ideas, but also apply them to primary texts. Our discussion of the postcolonial 'Holy Trinity' – Edward Said (2003), Homi K. Bhabha (1994) and Gayatri Spivak (1988) – was rooted in an exploration of Chinua Achebe's classic, *Things Fall Apart*. As the aim of this discussion was to explore postcolonialism in its own right before pairing it with ecocritical ideas, early conversations focused on direct applications of postcolonial theory to Achebe's novel. For example, we considered how the ending of Achebe's novel corresponded with the generalisations, prejudices and cultural constructions critiqued by Said in *Orientalism*. One could also read Achebe's depiction of Igbo women in light of Spivak's critique of the speaking subaltern, paying attention to silences in the book that may gesture towards a subaltern voice, or identify various 'mimic men' in *Things Fall Apart* and question if mimicry is presented as menacing in the novel. Although ecocritical ideas may pop up in these conversations – Bhabha's interest in borders and liminal spaces can catch the attention of the more ecocritically grounded students, as might Achebe's numerous depictions of yams – the overall aim here is to come to terms with three postcolonial theorists and the ways they think about the construction and dissemination of culture and language.

A similar exercise was carried out with ecocriticism. To ease the transition between discourses, we began an exploration of ecocriticism by asking students to sketch out a definition of postcolonial studies on the blackboard based on readings. We asked: what do postcolonial critics do? What do they read? How do they read it? With what other fields/disciplines does postcolonialism interact? Next, we attempted to define ecocriticism in a similar way. In our class, students read early ecocritical essays, including Cheryll Glotfelty's introduction to *The Ecocriticism Reader*, the short position

papers of the 'Defining Ecocritical Theory and Praxis' portion of the Association for the Study of Literature and Environment (ASLE) website, and excerpts from *The Green Studies Reader* (2000). Working from these varied introductions, we asked ourselves whether (1) ecocriticism is limited to nature writing; (2) if ecocriticism is a necessarily interdisciplinary field; and (3) how ecocriticism interacts with other types of literary theory.

As with postcolonial discussions, an exploration of ecocriticism should be paired with a primary text key to the field – in our case, Edward Abbey's *Desert Solitaire*. At first, students were encouraged to think about Abbey's text in terms of ecocriticism only, although this proved more challenging than in the previous exercise, as students found it difficult to let go of the postcolonial ideas they had recently learned. Still building on our potted definition of ecocriticism, I broke students up into small groups and asked them to identify a key 'literature of place' passage in Abbey's text. We explored these passages to determine exactly what kind of place Abbey represents and the language and images he uses to represent that place. Then, organically, a postcolonial/ecocritical dialogue began to emerge. Some students were attracted to passages that construct the Arches National Monument as an empty place, drawing on Said's ideas to critique the erasure of a Native American presence in Abbey's text. Others were interested in the way Abbey's place is constructed in overtly masculine terms, using Spivak's critique of the silenced female subaltern to articulate their readings. This dialogue was developed further in a second session dedicated to critiques of first-wave ecocriticism that considered the work of Dana Phillips (1999) and Michael Cohen (2004) alongside Buell's description of second-wave ecocriticism, and explored the emergence of a new form of ecocriticism interested in issues of race, class and gender and literature beyond nature writing.

In the final session of this section, I asked students to pursue a postcolonial ecocritical dialogue in earnest. Recent postcolonial ecocritical articles, such as Nixon's 'Environmentalism and Postcolonialism' and Graham Huggan's 'Greening Postcolonialism', provided a good starting point for asking students to call out topics of postcolonial ecocritical interest suggested within and to reflect on how these topics can offer new insight to Achebe's and Abbey's texts. One might also draw upon Heise (2008), DeLoughrey and Cilano (2007) and O'Brien (2007) usefully here. A list of

topics might include, among other subjects: development; purity; gardens; ecofeminism; critiques of scientific metanarrative; pastoral; environmental justice; environmental refugeeism; and issues of representation.

As these initial sessions involve a lot of reading, I assigned a short response paper each week that approached the assigned texts in various ways. Most successful were those response papers that attempted to summarise key arguments in one sentence or played devil's advocate by critiquing underlying assumptions. An essential part of these response papers should be the formulation of one or two questions designed to generate class discussion.

Building the dialogue

After having introduced the key concepts of a potential postcolonial ecocritical dialogue in the first section of the class, we turned our attention to developing that dialogue via readings of postcolonial novels in the second. As with the first section of the course, time restrictions made it impossible to present students with a full representation of postcolonial novels, let alone literatures, but texts can be selected for various reasons. Some, such as Amitav Ghosh's *The Hungry Tide*, Shani Mootoo's *Cereus Blooms at Night* and V.S. Naipaul's *The Enigma of Arrival*, have already inspired postcolonial ecocritical work (Mukherjee 2006, Hoving 2005; Tiffin 2005 respectively). Others, such as Ken Saro-Wiwa's *Sozaboy* and Arundhati Roy's *The God of Small Things*, introduce students to the fictional work of two well-known environmental activists. Finally, setting texts such as Sam Selvon's *A Brighter Sun* and Ben Okri's *The Famished Road* challenges students to read popular and well-digested postcolonial novels in new ways.

Perhaps the most problematic aspect of teaching postcolonial ecocriticism is that students are presented with environments with which they are likely to be unfamiliar. Much ecocritical pedagogical work has focused on the benefits of place-based learning, and even non-place-based ecocritical courses on American and British literature can assume a general familiarity with cultural traditions, histories and geographies. Postcolonial ecocriticism courses, on the other hand, pose the significant pedagogical challenge of asking students to engage with potentially unfamiliar terrains, languages

and customs. How, for example, do you ask students in Nevada to approach the Sundarbans of Ghosh's novel? The region is difficult to access, both mentally – its notoriously lush mangrove forests stand in stark contrast to the dry sparseness of the Great Basin desert – and physically – the Sundarbans are, after all, roughly 8000 miles from Reno. I recommend three strategies to turn this challenge into an opportunity to practice a comparative ecocriticism that pushes students to think outside the confines of familiar places and ideas. First, limit the number of environments read about to narrow the comparative scope. For example, a syllabus might select texts from three geographical regions – India, Nigeria and Trinidad – in lieu of a more comprehensively international survey.

Second, task a student with providing contextual information for each class – an essential part of weekly discussions. Each week, ask a 'background' student to provide information on the text that will help situate the work historically, geographically, culturally and environmentally. The weakest responses to this assignment focus heavily on author biography, leaving the instructor and other students to fill in gaps in knowledge and experience. The strongest, however, provide the class with enough talking points and insight to fill hours of discussion. A background report on Ghosh's novel, for example, might begin by situating the Sundarbans as one of the most ecological diverse regions of the planet before turning to the Indian government's 40-year-old Project Tiger scheme and concluding with recent climate change reports that show the Sundarbans to be in immediate danger of rising sea levels. Similarly, reports on *Sozaboy* and *The God of Small Things* might delve into the biographies of Ken Saro-Wiwa and Arundhati Roy to show their commitment to the ecology of the Niger Delta and Kerala, respectively, before illustrating the national and transnational threats to those regions. This assignment is successful in helping students engage with environments that, before the course, remained beyond their knowledge. In an informal end-of-term survey, one student commented that 'this seems to be the only practical way to still read these books in context' and admitted that 'even though it's only a crash-course coverage of local ecology, politics, history, etc., it seems pretty necessary and tremendously helpful'.

Third, simply encourage students to engage with the texts as texts. In my own research, I am interested in the way the formal

aspects of a text can encode in them a specific understanding of that text's environment(s) via language and narrative structures. I have started to think about the implications of switching from reading for *environment* – that is, for mimetic or realistic depictions of nature – to reading for *environmentality* – that is, for evidence of the way a text's language and form encodes a construction of and subsequent interaction with that text's environment.[2] The shift is subtle but has three significant implications. First, it assumes the assertion of the existence of nature outside of language that dominates much first-wave ecocriticism to be a moot point, and instead seeks to understand how people around the world conceive of and live in their ecological homes. Second, it is a project particularly suited to the study of postcolonial literature, given the range of environments and languages presented in such texts and the interest in cultural construction among theorists like Said, Bhabha and Spivak; and third, it proves a useful approach to generating discussion in class.

A closer look at Selvon's *A Brighter Sun* serves as an example of how reading for environmentality can offer up new ecocritical interpretations. The novel, first published in 1952, charts the political and artistic development of Tiger, a naive young Trinidadian. Students that focus on Tiger's relationship to his garden tend to offer a pessimistic ecocritical interpretation of *A Brighter Sun*. Tiger's garden is easily understood as symbolic of the cane fields of indentured servitude and thus is linked to Trinidad's agricultural sites of historical trauma. According to this reading, Tiger's act of bulldozing his crops while building a road is seen as a razing of the past – a rejection of the legacy of Indo-Caribbean labour in favour of a metropolitan, multicultural Trinidad. Sites of agricultural labour, in other words, are sacrificed as Tiger frees himself of his nation's colonial past and embraces a future in modernity.

Students that focus on the relationship between the wider Trinidad environment and Tiger's maturation, however, tend to read the novel more optimistically. An interpretation of the novel sensitive to environmentality, or the relationship between a text's environment and its linguistic and cultural construction, would notice that much of the maturation that leads to Tiger's eventual self-expression occurs while he engages with his wider environment and the Trinidadian atmosphere. For example, the reader is provided with an omniscient view of Tiger's curiosity and ignorance as he sits atop a hill

overlooking the city in a pivotal scene. Tiger is shown becoming aware of the racial injustice he sees encoded in the city's geographic districts and contemplating his crude meteorological knowledge, which distinguishes fluffy white clouds from grey, rain-making ones. This knowledge and setting inspire the young man, and the third-person narrator notes that Tiger begins to feel 'as limitless as the space between him and the sky' (p. 99). Harnessing the 'power' he feels while looking at the sky, Tiger overwhelms the narrator's Standard English with free direct discourse:

> Man if I tell you bout the things I want to find out! What I doing here now? Why I living? What all of we doing here? Why some people black and some white? How far it is from here to that cloud up there? What it have behind the sky? Why some people rich and some poor? (p. 101)

The replacement of the narrator's Standard English with Tiger's creolised voice does not last long; the next paragraph resumes an omniscient perspective, noting that Tiger 'imagined himself coming to the gardens to read'. However, this brief interlude of creolised language demonstrates Tiger's initial steps towards self-expression. The passage also illustrates the importance of the text's environmentality to Tiger's eventual self-expression, as an immediate connection can be drawn between the way the atmosphere is constructed – powerful, whole, limitless – and the text's optimistic depiction of a strong, unified and independent Trinidad, symbolised by Tiger's emerging creolised language.

The debate arising from these two interpretations of the text's environment can help students better appreciate the nuances of postcolonial ecologies and their representations, as well as reasons why some representations (atmosphere, sky) are depicted more positively than others (gardens, cane fields). Exploring readings of environmentality such as the one presented in *A Brighter Sun* proves a fruitful exercise, as they not only stress the potential contribution of a postcolonial interest in cultural constructions to ecocriticism, but also stretch students familiar with ecocriticism to think about representations of nature in new and comparative ways that acknowledge how a text's representation of an environment may differ from their own interpretation of the physical world – which is, of

course, a representation in itself. This awareness of the nuances of environmental interpretation and representation can do much to modify a student's perception of environments and environmentalisms around the world and encourage the questioning of one's own cultural and linguistic relationship to his/her ecological home.

Assessment and evaluation

One judge of the course's ability to stimulate a postcolonial ecocritical dialogue lies in the range of topics presented by the end-of-term papers. Some students, inspired by the course's emphasis on environmentality, took formalist approaches in their ecocritical readings of language and narrative structure. Other students took more issue-driven approaches, clearly inspired by the list of potential postcolonial ecocritical considerations we drafted on the board early in the semester. These papers focused on a wide range of issues – including environmental refugeeism, water contamination and availability, development via roads and deforestation – and all took a comparative approach by examining novels from more than one region. The range of topics is illustrative of the postcolonial ecocritical dialogue I hope to communicate to the students – namely, the intersection of two discourses that can be sensitive to the materiality of postcolonial environments *and* the cultural/political statements encoded in the representations of those environments.

In the informal survey, students responded particularly well to the course's emphasis on environmentality, with all stating this helped their understanding of a potential postcolonial ecocritical dialogue. One student, familiar with ecocriticism from previous courses, noted that this emphasis on language and form had greatly widened his understanding of the type of comparative insight that ecocriticism can offer up and made him more sensitive to his own representations of his home environment. All survey respondents also stated that the course's interest in postcolonial ecology affected their environmental agency in some way. One student, now a resident of Charleston, South Carolina, noted that the class has made her much more mindful of the historical and sociopolitical forces that shape communities and their environments. Now considering it 'absolutely impossible to think about a place without considering the history of the area and the people who have dwelled there (or no longer dwell

there, as is the case)', upon completing the class she joined a non-profit grassroots environmental organisation in Charleston that uses community round-table discussions to find common ground among disparate voices often not heard elsewhere. Another student noted a similar change in environmental agency, as the class has inspired him to further explore different approaches and tools (literary and otherwise) that environmentalists and writers use around the world to strategically address environmental issues ranging from public policy to the popular imagination, as he himself responds to crises in Pakistan, Haiti and Las Vegas.

Students did suggest two improvements. First, they would have liked more integration of the two units, with specific questions about the postcolonial and ecocritical theory discussed in the first section more frequently raised in the second. This change would indeed benefit discussion and could easily be encouraged via weekly response paper prompts or directed in-class activities. Second, several students suggested a place-based experience be worked into the course. One advocated a seminar on 'bringing subalternity home' that questions what subalternity means in Reno, Nevada or the American West. This seems to me a helpful suggestion, and one that could easily feature in a concluding discussion in the first section and be adapted to the various 'home' experiences of the course's location. Another recommended using visual media to create 'virtual' field trips, during which students would read and write about the environment being simulated for them. Although this idea is more challenging, the instructor or weekly 'background' student could easily incorporate multimedia in discussions, perhaps even making films/slide shows digitally available to students while they are reading respective texts. Ed Kashi's photojournalism work chronicling the oil industry in the Niger Delta (available from the *Guardian* newspaper website), for example, may help students appreciate the setting and political and environmental tensions that inform Saro-Wiwa's *Sozaboy*.

To these suggestions I add two of my own. The proliferation of postcolonial ecocritical work will necessarily alter syllabi of this type in the future, as Graham Huggan and Helen Tiffin's newly published *Postcolonial Ecocriticism* and forthcoming work on postcolonial ecology from Oxford University Press, University of Virginia Press and Routledge, among others, will no doubt contribute to the postcolonial ecocritical dialogue in significant ways. Finally,

I recommend returning to the list of postcolonial ecocritical concerns at the end of the course and seeking responses to them to gauge how student understanding of ecocriticism, environmentalism and the environment has been modified.

Notes

1. See, for example, Arnold and Guha's *Nature, Culture and Imperialism*, Shiva's *Biopiracy* and *Earth Democracy*, Roy's *The Cost of Living*, and Saro-Wiwa's *A Month and a Day*.
2. My move from environment to environmentality is inspired by Lawrence Buell: 'Once I thought it helpful to try to specify a subspecies of "environmental text," the first stipulation of which was that the non-human environment must be envisaged not merely as a framing device but as an active presence, suggesting human history's implication in natural history. Now, it seems to me more productive to think inclusively of environmentality as a property of any text – to maintain that all human artifacts bear such traces, and at several stages: in the composition, the embodiment, and the reception' (2005, p. 25).

Works cited

E. Abbey ([1968] 1971) *Desert Solitaire: A Season in the Wilderness* (New York: Ballantine Books).
C. Achebe ([1959] 1994) *Things Fall Apart* (New York: Anchor Books).
D. Arnold and R. Guha (eds) (1995) *Nature, Culture and Imperialism: Essays on Environmental History of South Asia* (Oxford: Oxford University Press).
ASLE (1994) 'Defining Ecocritical Theory and Praxis', 6 October 1994, http://www.asle.org/site/resources/ecocritical-library/intro/defining/, accessed 6 May 2011.
H.K. Bhabha (1994) *The Location of Culture* (London: Routledge).
L. Buell (2005) *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination* (London: Blackwell).
M. Cohen (2004) 'Blues in the Green: Ecocriticism Under Critique', *Environmental History* 9:1, 9–36.
L. Coupe (ed.) (2000) *The Green Studies Reader: From Romanticism to Ecocriticism* (London: Routledge).
E. DeLoughrey and C. Cilano (2007) 'Against Authenticity: Global Knowledges and Postcolonial Ecocriticism', *ISLE* 14:1, 71–87.
E. DeLoughrey, R.K. Gosson, and G.B. Handley (eds) (2005) *Caribbean Literature and the Environment: Between Nature and Culture* (London: University of Virginia Press).
A. Ghosh ([2004] 2005) *The Hungry Tide* (London: HarperCollins).
C. Glotfelty (1996) 'Introduction: Literary Studies in an Age of Environmental Crisis', in *The Ecocriticism Reader: Landmarks in Literary Ecology*,

ed. C. Glotfelty and H. Fromm (Athens, GA: University of Georgia Press), xv–xxxvii.
U. Heise (2008) *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* (Oxford: Oxford University Press).
I. Hoving (2005) 'Moving the Caribbean Landscape: Cereus Blooms at Night as a Re-imagination of the Caribbean Environment', in *Caribbean Literature and the Environment: Between Nature and Culture*, ed. E. DeLoughrey, R.K. Gosson, and G.B. Handley (London: University of Virginia Press), 154–168.
G. Huggan (2004) 'Greening Postcolonialism: Ecocritical Perspectives', *Modern Fiction Studies* 50:3, 701–733.
G. Huggan and H. Tiffin (2010) *Postcolonial Ecocriticism: Literature, Animals, Environment* (London: Routledge).
S. Mootoo (1998) *Cereus Blooms at Night* (London: Granta).
P. Mukherjee (2006) 'Surfing the Second Waves: Amitav Ghosh's Tide Country', *New Formations* 59, 144–157.
V.S. Naipaul ([1987] 2002) *The Enigma of Arrival: A Novel in Five Sections* (London: Picador).
R. Nixon (2005) 'Environmentalism and Postcolonialism', in *Postcolonial Studies and Beyond*, ed. A. Loomba, S. Kaul, M. Bunzl, A. Burton, and J. Esty (London: Duke University Press), 233–251.
S. O'Brien (2007) 'Back to the World: Reading Ecocriticism in a Postcolonial Context', in *Five Emus to the King of Spain: Environment and Empire*, ed. Helen Tiffin (Amsterdam, Rodopi), 177–199.
B. Okri ([1992] 1993) *The Famished Road* (London: Doubleday).
D. Phillips (1999) 'Ecocriticism, Literary Theory and the Truth of Ecology', *New Literary History* 30:3, 577–602.
A. Roy (1999) *The Cost of Living* (London: Flamingo).
———([1997] 1998) *The God of Small Things* (London: HarperPerennial).
E. Said ([1978] 2003) *Orientalism* (London: Penguin).
K. Saro-Wiwa (1995) *A Month and A Day: A Detention Diary* (London: Penguin).
———([1985] 1994) *Sozaboy: A Novel in Rotten English* (London: Heinemann).
S. Selvon ([1952] 2002). *A Brighter Sun* (New York: Longman).
V. Shiva (1999) *Biopiracy: The Plunder of Nature and Knowledge* (Cambridge, MA: South End Press).
———(2005) *Earth Democracy: Justice, Sustainability, and Peace* (Cambridge, MA: South End Press).
W. Slaymaker (2001) 'Echoing the Other(s): The Call of the Global Green and the Black African Response', *PMLA* 16:1, 129–144.
G.C. Spivak (1988) 'Can the Subaltern Speak?', in *Marxism and the Interpretation of Culture*, ed. C. Nelson and L. Grossberg (Chicago: University of Illinois Press), 271–313.
H. Tiffin (2005) '"Man Fitting the Landscape": Nature, Culture, and Colonialism', in *Caribbean Literature and the Environment: Between Nature and Culture*, ed. E. DeLoughrey, R.K. Gosson, and G.B. Handley (London: University of Virginia Press), 199–212.

Part II
Interdisciplinary Encounters

7
Literature and Ecology

Louise Westling

The long tradition of pastoral and the Romantic movement of the nineteenth century have given critics plenty of experience in thinking about how literary works consider the human place in nature. What is new about ecocriticism is its implicit congruence with the sciences that tell us about Earth's history, the relation of humans to other life forms, balances and disruptions in living systems. Dana Phillips charges that ecocritics, like too many environmental activists, have been motivated by naive ideas about harmony and holism. Indeed, he says that in spite of appeals to interdisciplinarity or transdisciplinary practice, 'ecocriticism has been lamentably under-informed by science studies, philosophy of science, environmental history, and ecology', subjects which professional responsibility ought to require us to know (Phillips 2003, pp. viii–ix). My object here will be to comment on the uneasy relations between literature and science, to discuss the ways writers and literary scholars have appealed to ecological concepts and to talk about how one might gain a working familiarity with ecological and evolutionary science. Then I shall illustrate how an ecocritical pedagogy can explore scientific and environmental emphases in contemporary literature.

We commonly assume that relations between literature and science have become more and more strained since the Scientific Revolution of the seventeenth century, when Newton and Descartes broke away from Aristotelian traditions to make objective analysis, experimentation and mathematics the defining methodologies. Stephen Jay Gould rejects this standard picture of the Scientific Revolution as a caricature based on simplistic historical models and

false dichotomies. Similarly, he maintains that the notion of an unbridgeable gulf between the sciences and humanistic disciplines is misguided, even if many working scientists and literary scholars believe it to be true (2003, pp. 11–15). The actual situation has been much more complex, with many of the experimental and mechanical reforms of seventeenth-century scientists growing out of precedents in medieval and Renaissance Aristotelian scholarship. And during most of modernity, a continuous interplay between scientific and artistic exploration has meant that poets, essayists, playwrights and fiction writers have been interested in the scientific developments of their own eras. All are swimmers in the same cultural sea. As a young man Darwin himself was steeped in the works of major literary figures such as Shakespeare, Samuel Johnson, Jane Austen, John Milton, Montaigne, Sir Thomas Browne, Swift, Defoe and Carlyle. His own scientific writing was full of literary qualities, as Gillian Beer demonstrates (1983, pp. 14–15, 31–48, 79–149). Thus, although some early modern scientists tried to set their practice apart from humanist traditions, natural philosophy and literature coexisted quite comfortably until the late nineteenth century, when the physical and life sciences began to grow more specialised and systematic. Thoreau's *Walden* is a case in point, in part a Montaignian essay, in part an excursion in practical natural history, but saturated throughout with classical learning and allusion. Gillian Beer reminds us that

> In the mid-nineteenth-century, scientists still shared a common language with other educated readers and writers of their time. There is nothing hermetic or exclusive in the writing of Lyell or Darwin. Together with other scientific writers such as G.H. Lewes, Claude Bernard, John Tyndall, W.K. Clifford, and even so far as his early work is concerned Clerk Maxwell, (writers whose works ranged through psychology, physiology, physics and mathematics) they shared a literary, non-mathematical discourse which was readily available to readers without a scientific training. These texts could be read very much as literary texts. (pp. 6–7)

At the same time poets and novelists have continued to be attentive to the sciences of their day. Beer has shown how profoundly Darwin's writings about the natural world and its evolutionary history shaped the world view of nineteenth-century fiction. Similarly, early in the

twentieth century the upheavals in physics led by Maxwell, Einstein, Bohr and Heisenberg captured the attention of Modernist writers like Yeats, Pound, Woolf, Joyce and Lawrence (Beer 1996, pp. 112–124; Albright 1997).

Literary scholars have only intermittently attended to those dynamics, in part because as academic disciplines became more and more specialised during the past century and science and technology grew increasingly dominant, literature, philosophy and the arts retreated into defensive enclaves. The resulting alienation of too many literary and scientific scholars from each other's enterprises has been the subject of intermittent debate, with humanists often claiming unique powers for imaginative writing and speculative theory, while scientists insist that the only certain knowledge comes from objective experimentation and quantitative measurement with mathematics as the ultimate arbiter, as Copernicus and Descartes asserted long ago. In 1959 C.P. Snow made a celebrated effort in his Rede Lecture at Cambridge to describe the estrangement between the two cultures of science and the humanities.

> Literary intellectuals at one pole – at the other scientists, and as the most representative, the physical scientists. Between the two a gulf of mutual incomprehension – sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding. (pp. 4–5. See also pp. 18–19 and 53–54)

A participant in both cultures as a physicist and a novelist, Snow believed that genuine understanding of the human situation in the world required intellectual perspectives from both, and indeed that the welfare of all people depended on a recognition of their complementarity. A few years later in another Cambridge lecture, literary critic F.R. Leavis excoriated Snow in vitriolic personal terms, calling his novels worthless and his arguments empty (1962). Because of the extreme tone of the attack, Snow's position gained even more attention, and the Snow–Leavis controversy came to define the unfortunate abyss that seemed to make collaboration and understanding among the disciplines impossible (see Whelan 2010 for a recent reappraisal).

During the past half-century, however, many scientists have worked to explain recent advances to the non-scientific public, just

as Arthur Eddington and James Jeans did with their popular introductions to relativity theory and quantum physics in the 1920s and 1930s. Rachel Carson used powerful literary techniques to popularise marine biology in *The Sea Around Us* (1951) and to alert the American public to the dangers of chemical pollution in *Silent Spring* (1962); James Watson explained the discovery of the structure of DNA in *The Double Helix* (1968); Richard Dawkins followed with *The Selfish Gene* (1976); Steven Rose countered Dawkins in *Lifelines: Biology Beyond Determinism* (1997); Lynn Margulis offered a new perspective in *Symbiotic Planet: A New Look at Evolution* (1998); and Richard Lewontin supplemented these debates in *The Triple Helix: Gene, Organism, and Environment* (2000). Works on physics such as Stephen Hawking's *A Brief History of Time* (1988); Nick Herbert's *Quantum Reality: Beyond the New Physics* (1985); and Brian Greene's *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for Ultimate Theory* (1999) have continued the tradition of Jeans and Eddington. Journals such as *Nature, Science*, *New Scientist* and *Scientific American* have functioned similarly to inform a wide lay audience of research developments being reported in specialised academic publications. Television programs starring celebrity scientists and adventurers like Jacques Cousteau, David Attenborough and Carl Sagan brought science to popular audiences in the UK and the US, and such efforts continue. Nevertheless in academia the gulf between scientists and humanists has remained a serious problem.

Harvard scientists E.O. Wilson and Stephen Jay Gould have recently taken up C.P. Snow's mission to argue again for rapprochement between the sciences and humanistic disciplines. Wilson came first in 1998, with *Consilience*, confident that science has the power to unite all learning and culture by fully explaining the physical world and human cultural productions that arise from it (p. 12). The quintessential scientific method of reductionism is key to Wilson's notion of how this will happen, with precise special studies in one scientific discipline and at one level of scale leading causally to explanations at the next level, and in other disciplines to syntheses that can provide wider and wider rational illuminations of complexity. The chain of causation beginning with physics leads with ever-branching pathways into more and more complex realms from biology to psychology and culture (pp. 66–71).

Gould's 2003 book *The Hedgehog, the Fox, and the Magister's Pox* agrees with Wilson's purpose but not with his essentially reductionist notion of an intellectual hierarchy governed from the top by physics, and he speaks of 'the peculiar notion that science utilizes pure and unbiased observation' as a pernicious foundational myth (p. 34). Gould acknowledges the power and necessity of reductionist strategies in the sciences but only as tools in a wider pluralistic enterprise of complementary epistemologies. For him, exclusive reliance on reductionism is invalidated by the *emergence* of novel developments that could not be predicted from constituent parts, as for example in evolution of new creatures from simpler ancestors, and by historical *contingency* or accident as a component of explanation (pp. 201–202). Darwin's evolutionary synthesis of a myriad facts collected from a vast number of species, geographies and examples stands for Gould as a superb example of the kind of consilience he feels Wilson could not approve, because it does not derive step-by-step from simpler to more and more complex rational operations and levels (pp. 209–212). Instead it is a kind of 'jumping together' of disparate facts among which one can see a common explanation. Gould explains that different scientific subjects require different methods, so that, for example, unvarying rules can be applied to the formation of quartz and the structure of different pieces of the crystal from various parts of the globe, but very different kinds of analysis are needed to explain why *Tyrannosaurus* lived in western North America but became extinct 65.3 million years ago. Similarly, various kinds of contingency are involved in the spread of *homo sapiens* from Africa and the disappearance of many other forms of the genus *homo* whose bones have been found all over Europe and the Middle East, as well as parts of Asia (pp. 224–225). Gould's notion of consilience is therefore based on pluralistic cooperation among varying sciences as well as between science and the humanities, with equal regard for the distinctive perspectives and methods among disciplines.

Whether or not Wilson's scientific confidence or Gould's more modestly pluralist vision of reintegration is more accurate, their work is welcome at a time when environmental problems have turned popular attention back to the value of science. But a recent conservative reaction in the US has vilified some branches of science, reviving the anti-Darwinist attitudes of the 1920s, rejecting the teaching of

evolution in the schools or insisting that it be labelled a theory and placed on a par with the theory of Intelligent Design. Conservative think tanks funded by corporate energy, chemical and automotive interests have systematically confused public debate with attacks on the sciences of climate change. From another direction, social-constructivist theory on the Left has attacked scientific pretensions of objectivity and the possibility of grand explanations of the natural world. Ecocritics have generally sided with evolutionary and climate science, and particularly focused on ecological concepts of biosystem relationships, restoration ecology, wildlife management and pollution controls. Glen Love's *Practical Ecocriticism* urges ecocritics to make themselves scientifically literate and to embrace Wilson's view of consilience (2003, pp. 37–64. See also Phillips 2003, pp. 83–134). However, during the past decade, in answer to charges of naiveté and lack of rigorous theoretical grounding, the turn to Continental philosophy within ecocriticism has drawn many toward the scepticism of critics like Donna Haraway and Bruno Latour.

Thomas Kuhn's classic study, *The Structure of Scientific Revolutions* (1962), long ago demonstrated the provisional nature of even the most powerful systems of scientific explanation, or paradigms as he called them. As the Ptolemaic description of an Earth-centred cosmos gave way eventually to the Copernican model of the solar system, so also the explanatory power of Newtonian physics gradually weakened as anomalies grew in number until the work of Maxwell, Einstein, Bohr and Heisenberg demonstrated how at the subatomic and cosmic scales classical physics had to be replaced by relativity theory and quantum mechanics. 'The history of science tells us', according to Brian Greene, 'that each time we think that we have it all figured out, nature has a radical surprise in store for us that requires significant and sometimes drastic changes in how we think the world works' (1999, p. 373). Continual reassessment and adaptation are necessary as new explorations and discoveries are made and as we use our limited human perceptions and ideas to make them intelligible (Jeans 1942, p. 175). Einstein's proofs of the relativity of perception and Heisenberg's demonstration of the uncertainties caused by the effect of scientific observation upon the phenomena under study made it clear almost a century ago that the dream of objectivity at the heart of the Scientific Revolution had to be abandoned. Subject and object can no longer be considered separate but

must be united into a single whole, and scientists must take account of their own immersion within the natural universe they study (Jeans 1942, p. 145).

From a different quarter came Donna Haraway's challenge to the ideal of pure scientific reason and objectivity in *Primate Visions: Race, Gender, and Nature in the World of Modern Science* (1989). There she analyses the twentieth-century history of primatology, from the Cartesian objectification of animals in early experimental treatment of monkeys and apes in European and American laboratories, to the gradual opening out of the discipline to include fieldwork in wild habitats and the influence of post-World War II Japanese primatology (1989, pp. 19–24, 115–132). In 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', Haraway condemns the 'god-trick' of presuming to see the world from outside and demands a practice of situated, provisional knowledges within shared conversations (pp. 190–191). In this view of science, she acknowledges the work of Bruno Latour, whose critique of modern science in *We Have Never Been Modern* (1993) shares a scepticism toward the claims of complete scientific access to the truth of physical reality at the same time that he defends the practice of science against extreme poststructural relativism and social constructivism. For Latour, taking living organisms out of their full environments and subjecting them to the artificial surroundings and violent mechanical interventions of the laboratory does not allow full access to what they are. All of us are part of the 'collective' for Latour, 'the association of humans and non-humans and "society" ', in intricate networks of hybridisation that must be taken into account in any branch of knowledge (1993, p. 4).

Where do these debates leave us as educators, trained in literary history and analysis, yet motivated by a sense of planetary crisis to approach texts from an environmental or ecological perspective? We must understand the provisional and culturally inflected quality of scientific research at the same time that we acknowledge its indisputable power. For philosophy, literature and art are complementary to the sciences, seeing behind the scientist dimensions and contexts that she cannot always see, and helping to show the larger dynamic whole within which scientific projects exist. Because novelists, poets, essayists and cinematographers develop their imagined realities from within the present cultural and scientific understanding of the

natural world, they can project possible futures based on present science; they can dramatise ecological dangers only beginning to be glimpsed in contemporary research projects; they can explore ethical dilemmas posed by new chemical processes and genetic engineering; and epistemological limitations revealed in physics or ecological modelling can be transferred into literary strategies or philosophical explorations.

In order to understand how literary works accomplish such a responsive interrelationship with science, ecocritical scholars need the kinds of scientific literacy advocated by Glen Love and Dana Phillips. Ecocriticism's very sense of itself is shaped by the life sciences, but it is not practical to attempt to retrain ourselves as scientific specialists. We must rely on the kinds of books I have been describing, written for lay audiences by working scientists and historians of science. Once introduced to the present state of primatology by Donna Haraway and Frans De Waal, for example, or to trends in physics by Brian Greene and Nick Herbert, or to research in microbiology by Steven Rose, Richard Dawkins, Lynn Margulis and Richard Lewontin, we can then venture to read specific research articles that may be pertinent to a particular literary text we might be teaching. And we can work with scientific colleagues at our colleges and universities who are willing to suggest further readings, to let us audit some of their courses, to give guest presentations in our classes and even to co-teach interdisciplinary courses or modules with us. Recent examples of such cooperation at my university include:

- 'The Mind and the Body', based on readings in neuroscience, philosophy and literature taught by a philosopher and a literary scholar;
- a course on volcanoes in literature co-taught by a geology professor and a literature professor;
- 'The Philosophy of Ecology', co-taught by a biology professor and a philosophy professor.

Gaining familiarity with scientific ecology is a bit trickier than dealing with more established scientific fields. Ecology emerged as a loose group of biological disciplines around the beginning of the twentieth century, closely associated with evolutionary biology and focusing on the relationships among living creatures and their environments.

'Ecology' shares the Greek root *oikos* (house, household, family) with 'economics', both implying interrelations within complex communities or systems. In the case of ecology, evolutionary biology demonstrates the kinship and interdependent historical development of organisms over millions of years, so that the 'house' or family of Earth's life must be seen to include human beings as always mutually dependent within its myriad forms. In recent years, however, the term 'ecology' has come to have two very distinct meanings, one popular and general and the other rigorously scientific. Popular uses of the term 'ecology' can mean almost any perspective concerned with interrelationships among organisms. 'Ecology' in this sense carries familiar positive connotations, and 'ecological' has become the favourite adjective for corporate greenwashing. Scientific ecology, in contrast, is a loose collection of specific but interrelated fields ranging from population ecology to restoration ecology, tropic dynamics, freshwater ecology, marine ecology, molecular phylogenetics, microbial ecology, biogeochemistry, and on and on through a bewildering array of subdisciplines.

Dana Phillips's characterisation of the many approaches and debates among ecologists is somewhat dated but instructive, though too detailed to be summarised here. Suffice it to say that the various subfields within ecology are not always compatible and are rapidly changing. Instead of assuming ecosystem balance on the analogy of a healthy organism (for example, climax forest), as used to be the case, now ecologists recognise disruption and constant change as typical in ecological communities, and that these collections of organisms are not always interconnected in the ways we used to think.[1] Furthermore, many traditional biologists do not consider ecology a genuine science because of its lack of well-defined laws and methodologies, and because of its ever-morphing variety of approaches to the vastly complex systems it must study. Indeed, Phillips himself falls victim to a kind of 'physics envy' when he derides much ecology for failing to achieve the reductionist, quantitative rigor of molecular biology (p. 45). Gould reminds us that science is not monolithic but rather extremely varied, with particular fields using a wide range of methodologies from field studies to many kinds of laboratory experiments and theoretical approaches (pp. 14, 256–260).

Ecocritics need not entangle themselves in these debates, nor attempt to gain more than a general familiarity with the array of

sub-fields among ecological scientists. We should familiarise ourselves with recent developments in the sciences, and especially biology, as I have mentioned above, but our central responsibility is to focus upon literary artists who rarely have specialised scientific expertise. Instead, they are concerned with ethical and ontological consequences and possibilities of the ecological information that science opens for us. Novelists like James Joyce and Virginia Woolf were excited by the possibilities of the new physics and biology early in the twentieth century, but they learned about relativity theory and quantum mechanics from Jeans and Eddington, from newspaper articles and serious journals of the day. The new ideas were in the air around them, as were Freud's and Darwin's. To teach Virginia Woolf's novels as ecocritics, we need to read Darwin, Jeans and Eddington, and then turn to Gillian Beer's essays on Woolf and science and have our students do the same (see also Westling 1999). Regarding other writers, we can similarly learn about the science that was important to them, as, for example, Ed Ricketts' marine biology was for John Steinbeck, and send students out to explore it. Such preparation will thus inform our main job, which is to read Woolf's and Steinbeck's novels with close attentiveness to the ways they present humans within the organic communities and landscapes of their narratives, and to the scientific ideas they adapt for their fictions.

Poets and novelists are doing something very different from what scientists do. While scientists seek to use denotative language to describe the physical world, writers use connotative, metaphorical language to explore and question the human place in it. Writers imagine situations that help readers experience the ethical problems of certain kinds of science and technology, to live vicariously in potential worlds our science might bring to pass by its manipulations, to make 'visible' through fictional situations the 'invisible' environmental dangers that their readers could not have imagined. Thus Dickens' *Hard Times* dramatises and condemns the environmental damage of industrial capitalism, as *Bleak House* places readers in the filthy miasma of nineteenth-century London, and Steinbeck's *Grapes of Wrath* explores the ecological catastrophe of the Dust Bowl. Don Delillo's *White Noise* satirically contemplates present dangers of chemical or nuclear accidents, and future horrors are projected in narratives like Octavia Butler's *Parable of the Sower* or Cormac McCarthy's *The Road*. As we shall see below, writers may use the

findings of science, as W.H. Auden does in 'A New Year Greeting', to redefine the human situation; or they may use biological information to develop elaborate conceits or new imaginative creations, as Butler does in her *Xenogenesis Trilogy*. In other words, poets and novelists use selected, often fairly general information from science to explore how human experience is to be understood, and literary scholars should approach that science accordingly. 'Ecocriticism' participates in the popular meaning of ecology more than it does in the scientific definition, focusing on the many ways texts engage human relationships with the wider living community of the planet. Let us turn to two examples.

Auden read science all his life and incorporated it into his writing. His 1969 poem 'A New Year Greeting' was inspired by a *Scientific American* article about the tiny symbionts living in our skin (Marples 1969, pp. 108–115). This information stimulated his whimsical contemplation of his own body as an ecological community (Auden 1991, pp. 837–839).[2] The poem begins as a comical salute to the yeasts, bacteria and viruses for whom his 'ectoderm/is as Middle-Earth to me' (p. 292), but it darkens and sharpens as it moves towards a bleak acknowledgement of destructive forces intertwined with creation and flourishing. In greeting these tiny symbionts, he explains,

> For creatures your size I offer
> a free choice of habitat,
> so settle yourselves in the zone
> that suits you best, in the pools
> of my pores or the tropical
> forests of arm-pit and crotch,
> in the deserts of my fore-arms,
> or the cool woods of my scalp.

After this invitation, however, he cautions against the creation of annoyances like acne or boils. This negative turn intensifies as the poem considers disasters caused by ordinary human movement. Taking a shower broils and drowns millions; changes of clothing bring hurricanes.

> Then, sooner or later, will dawn
> a day of Apocalypse,

> when my mantle suddenly turns
> too cold, too rancid, for you,
> appetising to predators
> of a fiercer sort, and I
> am stripped of excuse and nimbus,
> a Past, subject to Judgement. (pp. 292–293)

This teasing, intimate meditation on human/animality intertwining undercuts the godlike anthropocentric illusions of its opening largesse (see also Margulis 1998; Lingis 2003). Students can read Mary J. Marples's article 'Life on the Human Skin' in *Scientific American* and discuss in class or write short essays about the particular poetic strategies Auden uses to consider the discrete ecosystem that Marples describes, with its own flora and fauna. A class meeting can be broken into teams of four to five students, each with a question to consider for 10 or 15 minutes before reconvening so that each team can report on its decisions and open them up for fuller analysis and discussion. Such questions might concern (a) why Auden chooses to address these creatures and what tonal effect his diction has; (b) what metaphors he uses to describe regions of his body and why; (c) what moral considerations the poem implies; and (d) the change in the speaker's assumptions about himself from the poem's beginning to the end.

Octavia Butler offers a more complex literary re-evaluation of the human situation in *Dawn*, the first novel in her *Xenogenesis Trilogy*. Her protagonist Lilith Iyapo awakes after a 250-year sleep in an organic spaceship belonging to an alien species of tentacled creatures called Oankali. They are gene traders who have rescued a group of humans after a nuclear war that nearly destroyed Earth. By interbreeding with the humans, the Oankali invigorate their own genetic makeup and attempt to improve the humans, blurring species boundaries in a developing kinship that will be deployed to recolonise the planet. Classroom discussion of the novel should consider how Butler uses the Oankali ship as a conceit for *both* the biosphere of Earth *and* a genetically modified future in which natural systems have been so totally controlled that no developmental novelty or independent evolutionary development is possible. The ship is a complex and intelligent being in a symbiotic relationship with the Oankali. Because of Lilith's and the other humans' involuntary

captivity and genetic manipulation by their hosts, historical and ethical themes of invasion, slavery and biological experimentation on captive subjects are interwoven in the plot. The novel can be assigned to take up a week or two of a course on literature and ecology or on biology and literature. Students can be given topics to explore outside of class and then be prepared to report on, such as:

- biological systems Butler used as the basis for imagining the Oankali. Clearly marine creatures like the octopus are her focus, but why?;
- historical examples of biological experiments on humans in the twentieth century and the ethical problems involved; for example, eugenics activities from 1800 to 1930, Nazi experiments in concentration camps, American experimentation on prison populations;
- scientific questions of species definition and genetic manipulation;
- human manipulation of plant and animal species as analogous to Oankali domestication.

Essay assignments could ask students to choose one main event in the novel for its dramatic, ethical or symbolically ecological function, as for example when Lilith is taken to meet the man the Oankali think would be a good mate for her, when she learns to touch an Oankali or when she wanders off by herself and buries a piece of food that festers in the soil and requires a rescue. The ecological complexity of Butler's imagined world in this novel is richly suggestive of present human political, social and scientific dilemmas open to far more pedagogical approaches than can be described here, but with Auden's 'New Year Greeting' it can illustrate the possibilities of teaching how literature directly engages ecological science and its philosophical implications.

Notes

1. Phillips (2003, pp. 42–82). See also Allen and Starr (1988); Levins and Lewontin (1980); Margulis (1998); Keller and Golley (2000); Simberloff (June 2004); Pickett et al. (2007); and Reiners and Lockwood (2010).
2. Underneath the title the following information appears in italics: 'After an article by Mary J. Marples in *Scientific American*, January 1969.' Auden clearly wanted to acknowledge his debt to the scientific article.

Works cited

D. Albright (1997) *Quantum Poetics: Yeats, Pound, Eliot, and the Science of Modernism* (New York: Cambridge University Press).
T.F.H. Allen and T.B. Starr (1988) *Hierarchy: Perspectives for Ecological Complexity* (Chicago: University of Chicago Press).
W.H. Auden (1991) *W.H. Auden: Collected Poems*, ed. E. Mendelson (New York: Vintage International).
G. Beer (1983) *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction* (London: Routledge & Kegan Paul).
———(1996) 'Physics, Sound, and Substance: Later Woolf', in *Virginia Woolf: The Common Ground – Essays by Gillian Beer* (Ann Arbor: University of Michigan Press).
S.J. Gould (2003) *The Hedgehog, the Fox, and the Magister's Pox: Mending the Gap Between Science and the Humanities* (New York: Harmony Books).
B. Greene (1999) *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for Ultimate Theory* (London: Vintage).
D. Haraway (1989) *Primate Visions: Race, Gender, and Nature in the World of Modern Science* (New York: Routledge).
J. Jeans (1942) *Physics and Philosophy* (Cambridge: The University Press).
D.R. Keller and F.B. Golley (2000) *The Philosophy of Ecology: From Science to Synthesis* (Athens, GA: University of Georgia Press).
B. Latour (1993) *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press).
F.R. Leavis (1962) *Two Cultures? The Significance of C. P. Snow* (London: Chatto & Windus).
R. Levins and R. Lewontin (1980) 'Dialectics of Reductionism in Ecology', *Synthese* 43:1, 47–78.
A. Lingis (2003) 'Animal Body, Inhuman Face', in *Zoontologies*, ed. Cary Wolfe (Minneapolis: University of Minnesota Press), 165–182.
G.A. Love (2003) *Practical Ecocriticism: Literature, Biology, and the Environment* (Charlottesville: University of Virginia Press).
L. Margulis (1998) *Symbiotic Planet*: *A New Look at Evolution* (New York: Basic Books).
M.J. Marples (1969) 'Life on the Human Skin', *Scientific American* 220, 108–115.
D. Phillips (2003) *The Truth of Ecology: Nature, Culture, and Literature in America* (New York: Oxford University Press).
S. Pickett, J. Kolasa, and C. Jones (2007) *Ecological Understanding: The Nature of Theory and the Theory of Nature* (Amsterdam: Elsevier).
W. Reiners and J. Lockwood (2010) 'Causes of Ecology's Conceptual Confusion', in *Philosophical Foundations for the Practices of Ecology* (Cambridge: Cambridge University Press), 37–66.
D. Simberloff (June 2004), 'Community Ecology: Is it Time to Move On?' *The American Naturalist* 163, 787–799.

C.P. Snow (1959) *The Two Cultures and the Scientific Revolution* (New York: Cambridge University Press).
L. Westling (1999) 'Virginia Woolf and the Flesh of the World', *New Literary History* 30, 855–875.
R. Whelan (2010) 'Fifty Years On, C.P. Snow's Two Cultures Are United in Desperation', *The Telegraph*, www.telegraph.co.uk/technology/5273453/Fifty-years-on-CP-Snows-Two-Cultures-are-united-in-desperation.html, accessed 6 May 2011.
E.O. Wilson (1998) *Consilience: The Unity of Knowledge* (New York: Random House).

8

Developing a Sense of Planet: Ecocriticism and Globalisation

Ursula K. Heise

The meanings of globalisation

From the 1960s to the mid-1990s, explorations of contemporary society and culture in the humanities and social sciences were centrally organised around the category of 'postmodernism'. While this term was often attacked for its inherent vagueness or the multiplicity of its meanings, it helped to focus discussions about the legacies of modernity as a social, political and economic set of structures, and about the legacies of Modernism, understood as a particular set of aesthetic practices dominant between the middle of the nineteenth and the middle of the twentieth century.[1] Such explorations of what followed 'the modern' in society and in the arts continue, of course, but from the mid-1990s onward, analyses of contemporary culture have tended to shift to 'globalisation' as their key organising term. On the surface, this concept, in its predominantly geopolitical and economic implications, seems to share little in common with postmodernism as a term with mostly cultural and aesthetic ramifications. Yet some of the fundamental questions that both concepts serve to highlight are quite similar: what are the legacies of the modern? Does globalisation mean the global spread of a European and North American-based style of modernisation, or are there different paths toward and beyond modernisation? How do geopolitical inequalities shape different forms of society and culture? What sources do contemporary innovations in culture and the arts draw on? In what ways do contemporary forms of culture continue and expand experiments first undertaken in the late nineteenth and early twentieth centuries, and

where do they break with modernism and forge entirely new forms of expression?

As in the case of postmodernism, one of the challenges in teaching globalisation arises from the multiplicity of meanings associated with this term. While Romance languages tend to use two different words to refer to the various dimensions of globalisation, such as *mondialisation* and *globalisation* in French, English has only one term to cover an immense spectrum of processes that range from international governance, global markets, corporate operations and various forms of migration all the way to new media technologies, cross-border communities and the global distribution of cultural artefacts. Over the last decade, 'globalisation' has tended to take on increasingly negative connotations in English, where it is now often associated with North American dominance, the exploitation of developing countries by transnational corporations and environmental irresponsibility. One of the first tasks in teaching theories of globalisation is therefore to point to the enormous variety of divergent realities that this term encompasses, and to encourage students to think carefully about what exactly they mean when they talk or write about globalisation.

In the framework of the environmental humanities, the concept of globalisation brings with it an additional set of challenges. From its beginnings in the 1960s and 1970s, the modern environmentalist movement has displayed ambivalence about global perspectives. On one hand, environmentalists understood themselves from the start as part of the global enterprise of rescuing the planet from the worst consequences of modern humans' uses of nature, as was obvious in René Dubos's slogan, 'Think locally, act globally' and the movement's embrace of photographs of Planet Earth generated by the Apollo 8 and Apollo 17 missions in 1968 and 1972. In particular, the image of Earth as a 'Blue Marble' seen from outer space became the icon of the first Earth Day in 1970; was mentioned as a turning point in human history in the Brundtland Commission's report in 1987; and resurfaced as a central image in the book and film versions of Al Gore's *An Inconvenient Truth* in 2006. On the other hand, environmental movements in various parts of the world, and particularly in the US, have focused on the loss of individuals' and communities' connections to their local natural environments as a principal cause of ecological problems. The call to return to a deeply felt and consistently lived 'sense of place' became, especially in North

America, the cornerstone of any genuine environmental ethics, often in association with vigorous criticism and sometimes militant resistance to globalisation understood mainly as the operations of global capitalism. Environmentalist thought and writing, then, are prime examples of the ambiguities of globalisation, as environmentalists embrace certain forms of social and cultural internationalism but reject many of its economic manifestations, often without any clear acknowledgment of the connections between the two.

Visual icons that students will be familiar with without having thought about their significance provide an easy teaching tool to introduce these complex issues. The 'Blue Marble' image is readily available online at the NASA photography archives, and can be easily compared to corporate logos that use some version of the planet image, such as the one that commonly appears on MasterCard credit cards. What are the implications of the image in each case? What purpose do they serve? Such questions help to lead students into the complexities of what it means to think globally, and can lead to a discussion of film footage from the 'Battle in Seattle' during the World Trade Organization (WTO) Conference in 1999 (for example by means of Stuart Townsend's 2007 documentary *Battle in Seattle*): what were the demonstrators resisting? How did they understand the meaning of 'globalisation'?

Such visual materials open the way for tackling relatively complex theoretical debates about the meanings of the global, its cultural representations and ethical implications. In an essay entitled 'Patriotism and Cosmopolitanism' published in the *Boston Review* in 1994, the philosopher Martha C. Nussbaum argued in favour of a cosmopolitan, cross-culturally oriented education for American youth. Her proposal was met with fierce resistance and passionate endorsements from a variety of writers and intellectuals from Judith Butler to Amartya Sen. While some argued that attachments to other cultures, let alone the world, can never attain the same kind of lived concreteness as attachments to the nation and one's local region, others portrayed the two kinds of commitments as complementary, and yet others highlighted the necessity of cosmopolitan perspectives in an ever more globalised world. Nussbaum's essays as well as many of the responses were subsequently collected in a volume called *For Love of Country*, whose dialogic dynamism easily draws students in as they identify with some voices and disagree with others. Is it possible

to care for the world as a whole? What does it mean to feel part of a nation, itself a highly abstract and historically contingent entity? If one agrees with Nussbaum's critics and emphasises the nation, what becomes of attachments to the local? How are experiences of and connections to the local, to one's region, nation, continent and the globe, parallel, and how are they different? All of these questions take the consideration of globalisation from the territory of seemingly simple visual images to the more difficult one of questions of transnational ethics, politics and culture.

This exploration of an extremely controversial debate about what modes of cultural awareness and identity are commensurate with an ever more connected world can either lead to a more in-depth engagement with various theories of globalisation, from Leslie Sklair's *Sociology of the Global System* (1991) and Arjun Appadurai's *Modernity at Large* (1996) to Ulrich Beck's *Risk Society* (1986), each of which articulates a quite different analysis of the underlying structures of globalisation. In shorter courses or for students not advanced enough to deal with such theoretical material, the ethical questions raised in *For Love of Country* can alternatively lead to a more immediate engagement with questions of environmental ethics in a global context, for example through Gore's *An Inconvenient Truth* in either its book or its film version. Both versions raise urgent questions about environmental ethics – what can or should individuals, local communities, nations and international organisations *do* in the face of climate change? – at the same time that they deserve close scrutiny in terms of their representational strategies: combinations of photography and text (in the book), of autobiography, travel narrative and scientific documentary (in both versions), and the insistent foregrounding of the laptop and the lecture hall as alternate ways of connecting with a global audience (in the film), for example, lend themselves to close analysis. For advanced students, this sequence might conclude with a discussion of the Indian historian Dipesh Chakrabarty's essay 'The Climate of History' (2009), which urges its readers to ask whether basic theories in the humanities and social sciences that take foundational inequalities of race, class or gender as their point of departure need to be reconsidered in view of the climate change challenge, which affects all humans.

Such a teaching module combining elements of visual analysis and theoretical exploration should aim to create an awareness on

the part of the students of how questions of environmental ethics, international politics and cultural representations connect with and condition each other. By way of a concluding quiz to such a module, it is useful to have students engage with one or another of the commodities that so frequently promise a direct route from the individual product to the planet as a whole; particular brands of yoghurt, cosmetics, house paint and cars, to name only a few, routinely promise that purchasing and consuming them will help to 'save the planet'. Given the knowledge of discourses about the global they have just acquired, students can be encouraged to explore how advertisements and products by which they are surrounded on a daily basis draw on particular images and stories about the global, what message they seek to convey, and whether they succeed or fail. Such a brief exercise prepares students for a more detailed engagement with questions of the global environment through nonfictional and fictional texts.

Global travel and the environment

Non-fiction prose, from Henry David Thoreau's *Walden* to Rachel Carson's *Silent Spring*, has played a central role in the development of environmentalist thought over the last two centuries, and environmentalists' engagement with the global is no exception to this tradition. Over the last two decades, travel writing in particular has assumed crucial importance in environmentalists' attempts to document and comment on ecological crises, many of which are shared across regions: problems surrounding demographics, agriculture, pollution, energy use, habitat destruction, biodiversity loss and climate change all play themselves out around the world in varying scenarios, often with consequences that reach across nations and continents. Travel narratives have provided environmentalist writers with a convenient framework to convey to their audiences a sense of planetary connections and global threats.

To introduce students to this genre, they might be encouraged to pick up any of the print or online travel guides they may have used in the past, whether for travel in their own country or abroad, and to investigate how much these guides make reference to ecological issues in their advice on travel itself, on the landscapes and wildlife which travellers are likely to encounter and on the ecological roots of cultural customs or social conflicts in the place of destination.

Inviting students to share their own experiences of nature and culture away from home provides a convenient way into the rich array of contemporary environmental travel writing. Mark Hertsgaard's *Earth Odyssey: Around the World in Search of Our Environmental Future* (1998), the model for many subsequent books in the genre, alludes back to Homer's epic, one of the oldest travel stories in the Western tradition. Hertsgaard deliberately sets out to develop an alternative environmentalist discourse that, while fully aware of the seriousness of threats to the environment and human health, seeks to avoid the apocalyptic pronouncements which had become such a stereotypical ingredient of environmentalist discourse by the 1990s. Yet in-class analysis, especially of Hertsgaard's chapters on China and the Sudan, will soon reveal that he did not manage to avoid this mode entirely. At the same time, Hertsgaard's volume, with its varied explorations of industrial pollution, famine triggered by war, the dangers of radioactivity and problems of population growth in a variety of countries, raises a recurring question with regard to environmental travelogues: the sheer variety of crises and the causes that triggered them defies the environmentalist impulse to connect the planet's problems in one overarching story regarding human uses of nature.

Travelogues that focus on single ecological issues are in a better position to avoid this problem. Mark Lynas's *High Tide* (2004) and Elizabeth Kolbert's *Field Notes from a Catastrophe* (2006) both focus on climate change and how it affects communities in various parts of the world. While issues of commensurability and coherence also surface in these accounts, they do so more marginally. An effective way of engaging with these climate change travelogues would be to focus students' attention, by way of excerpts, on the writers' different ways of portraying the same iconic location. Both Kolbert and Lynas, over the course of their journeys, travel to Shishmaref, Alaska, a Native Alaskan community forced to relocate because of thawing permafrost, disappearing sea ice and rising sea levels. But whereas Lynas foregrounds the community leaders' conviction that their cultural and social community will persist in spite of any relocation, Kolbert emphasises mixed fears and hopes on the part of Shishmaref residents about the loss of their traditional environment and the future availability of convenient modern technologies. Both authors, however, even as they emphasise the material ecological changes, make Shishmaref a synecdochic location for understanding the future of

the planet, in a rhetorical move often repeated in environmental travelogues.

David Quammen's *The Song of the Dodo* (1996) and Terry Glavin's *The Sixth Extinction* (2006), both global travel narratives focused on species extinction, provide a similarly interesting case for comparison. Quammen frames his account in terms of ecological science, particularly the concept of 'island biogeography', whereas Glavin's principal focus lies in the politics that surround controversies over endangered species. Both of them struggle with the effects of modernisation on global nature; but for Quammen, the principal story is one of ecological fragmentation, while for Glavin it amounts to a story of social inequality and political mismanagement. Their elegiac lament over the rapid disappearance of a large part of our current species abundance might be usefully complemented with Douglas Adams and Mark Carwardine's *Last Chance to See*, perhaps to date the only book on biodiversity loss to take a humorous perspective to the issue. As Adams and Carwardine travel around the globe to see the last specimens of endangered species, they foreground the comic maladaptations of animals and humans to their environment and thereby propose an ultimately comedic view of the global in its natural as well as its cultural dimensions.

In lectures and seminars about authors such as Quammen, Lynas, Kolbert and Glavin, students sometimes express unease about the way in which residents of faraway regions in general and indigenous populations in particular become mere informants and case studies to the Western travellers, who seek to substantiate a general argument that exceeds the informants' particular situation. Indeed, the relationships between the travelling journalist, scientist or environmental activist and his or her conversation partners along the way, whether they be local residents, politicians, scientists or activists, are worthy of close scrutiny, since the encounters that ensue so often resonate with earlier accounts of colonial explorers or anthropologists. In their eagerness to document systemic ecological crises and to portray the state of the planet as a whole, European and North American writers run the risk of reducing or misunderstanding the history and full complexity of locals' engagements with nature. Such cross-cultural as well as ecological misunderstandings are also at the heart of not a few works of recent fiction that engage with the global environment. While global environmental travelogues seek

to generate a clearer understanding of how ecological crises manifest themselves around the globe, fictional texts tend to emphasise the misunderstandings that arise when individuals and communities with different cultural assumptions encounter such crises.

Global ecology and cross-cultural misunderstanding

Several recent novels, written by authors with widely divergent experiences, perspectives and writing styles, focus on such scenarios of both cultural and ecological misunderstanding. Teaching these literary texts in conjunction with theories of globalisation and with some of the travel narratives discussed in the last section helps to emphasise that a global or cosmopolitan perspective can only arise from the ability to look at environmental issues from several, sometimes conflicting cultural angles. At the same time, many of these texts highlight the conflicts and convergences between scientific and other approaches to nature in the effort to preserve the environment. Classes dealing with these novels should have as their goal the development of students' ability to think cross-culturally and cross-disciplinarily as an indispensable ingredient of an understanding of global environmental issues.

Formally, almost all of the novels I will briefly present here adopt one version or another of the parallax structure developed by high Modernist writers such as William Faulkner, Ford Madox Ford, James Joyce and Virginia Woolf: the same events or successive episodes of the same plot are narrated from the perspective of different characters so as to highlight the way in which perceptions of reality shift depending on underlying cultural assumptions, personal memories, experiences and expectations. But the texts differ in the breadth of different perspectives they confront with each other. Barbara Kingsolver, in her *Poisonwood Bible* (1998), narrates the relocation of an American missionary, Nathan Price, and his family from Georgia to what was, in the late 1950s, the Belgian Congo. The novel's chapters are told from the perspective of Price's wife, Orleanna, and their five daughters, who gradually mature over the course of the novel and come to adopt very different lifestyles and relations to their African environment. The novel portrays Nathan Price's ecological misunderstandings in loving detail as he brings bean plants from the United States, plants them in the way he is accustomed to against the

advice of the African villagers, sees the seedlings swept away in the first rainstorm and replants them, only to realise that insects in the new ecosystem do not recognise and fertilise these unfamiliar plants. The family also confront a radically different culture, and have trouble coming to understand the village chief's offer to accept one of the Price daughters into his polygamous marriage as effectively an act of charity in a time of extreme need rather than a social and erotic transgression. Some of the Price daughters come to respect and understand African culture and its particular uses of nature; one of them, indeed, ends up marrying a Congolese man and becomes involved in Congolese politics after the country achieves independence. Another one goes on to lead the life of a separatist white elite, while yet another returns to the United States. Their different engagements with their father's religious beliefs, his misogyny, their upbringing, African ecology and African politics highlight how individuals situate themselves very differently against the shared background of the cultural and ecological encounter between Americans and Congolese in the novel.

Cuban novelist Mayra Montero's *Tú, la oscuridad* (1995; translated as *In the Palm of Darkness*) and Indian writer Amitav Ghosh's *The Hungry Tide* (2004) use the parallax structure to stage the encounter between more radically divergent perspectives, confronting scientists from the developed world with urban, rural and indigenous inhabitants of developing countries whose knowledge of the natural world is differently structured. In *Tú, la oscuridad*, the perspective of an American herpetologist, Victor Grigg, who travels to Haiti to seek out an extremely rare and endangered frog, the *grenouille du sang* (*Eleutherodactylus sanguineus*), alternates with that of his Haitian guide, Thierry Adrien, who has seen the frog and is intimately familiar with the places on the island where it might be found. Through this alternation, Montero juxtaposes different histories as the reader comes to know the two men's families, education and relationships with women, as well as different kinds of knowledge: Griggs represents Western science with its desire to explore, catalogue and preserve, while Adrien derives his knowledge of nature from his familiarity and long-term residence in the local environment. Griggs writes, whereas the illiterate Adrien records his knowledge orally. The novel does not seek to validate or criticise either register of knowledge but rather aims to show how they converge as Grigg and

Adrien gradually establish an unstated bond and locate the frog. But then Haiti's political turmoil overtakes them, forcing both of them to leave the island precipitously on the same ship. The ship sinks, and both of them, as well as the carefully, scientifically prepared specimen of the last *grenouille du sang*, are lost forever. Brief factual vignettes in between chapters that point to the disappearance of frog species around the world provide a global framework for this particular scenario, highlighting the kinds of cultural and epistemological synergies that the novel suggests are necessary in an age of global ecological crisis.

Amitav Ghosh explores a similar scenario in *The Hungry Tide*, in which a young American scientist of Indian descent, Piyali Roy, travels to the Sundarban wetlands in India to study an endangered river dolphin species. Like Griggs, she develops a close relationship with an illiterate local guide, Fokir, whose experience as a fisherman has given him close familiarity with the biological life of the Sundarbans. But the novel never narrates events from Fokir's perspective; instead, it alternates Roy's viewpoint with that of a multilingual translator and writer from Delhi, Kanai Dutt, to whom the ecology of the wetlands is much more foreign than to Roy. During the killing of a Bengal tiger by village people, these characters' very different approaches to nature and to conservation erupt in full force – differences that the novel also makes visible through the juxtaposition of mythological tales about the tiger and the forest with Roy's story of scientific exploration. At the same time, the attempt by displaced Indian villagers to settle in the Sundarbans and their expulsion and massacre at the hands of the Indian government raise urgent questions about the comparative needs of impoverished humans and endangered animals as they compete for the assistance of governments and environmentalists. Both Montero's and Ghosh's novels, therefore, lend themselves to a detailed exploration of the different cultural frameworks that are brought to bear on questions of conservation in a highly networked world and the complex ethical questions that arise from the entanglement of different cultures with the same ecosystem.

Indra Sinha's *Animal's People* (2007) poses questions of cultural difference and global ethics more aggressively by narrating events from the viewpoint of a narrator so different from the average reader that he does not even consider himself human. Janvaar – 'Animal' – has been physically deformed by poison gases during an

industrial accident in the Indian city of Khaufpur, a fictional version of Bhopal, where an explosion at the Union Carbide plant in 1984 killed over 2000 people immediately and tens of thousands more slowly. Eighteen years after the accident, the Khaufpuris still fight for compensation from the 'Kampani' in legal courts where the company's lawyers do not even bother to set foot. Animal, one of the worst deformed victims and among the poorest of the poor, defies stereotypes of the victim through his self-confident, raunchy, humorous and penetrating narrative of the arrival of an American doctor, Elli Barber, who opens a free clinic that the Khaufpuris badly need. Yet her idealism founders in the face of local leaders who suspect her of being in cahoots with the 'Kampani' and order a boycott of the clinic even as elderly people and children suffer and die. Barber, in her turn, is at pains to comprehend why Khaufpuris put up with their sordid and polluted urban environment and reject the help they so urgently require. Barber's youthful energy and vision is juxtaposed, in turn, with the elderly French nun Mère Ambrosine, who has been mentally disturbed since the accident but refuses to leave the city where she has spent most of her life. Different modes of Western engagement with Western exploitation of the developing world, therefore, here appear as seen through the eyes of someone who seems to have the least agency of all and yet helps to precipitate some of the central plot events. Animal's stubborn insistence on his viewpoint and his insistence on his right to live life in a way that may not seem the most desirable to the journalists, anthropologists and other Westerners to whom he tells his story, leads easily into discussions of 'disaster porn', environmental satire, protest narrative and the complicated entanglements of individuals and local communities in global legal, political and economic networks.

Karen Tei Yamashita's *Through the Arc of the Rainforest* (1990), finally, might serve to round out such a series of textual discussions, even though the novel was published earlier than any of the others discussed here. Yamashita is, in a sense, the most 'postmodernist' of the writers I have mentioned; she not only investigates hybridisations of nature and technology in much greater detail, but also blends the storytelling modes of North American ethnic writing, Latin American magical realism and Japanese techno-postmodernism in a novel that skirts the edges of science fiction. A mysterious substance called the Matacão, hard as rock but malleable as plastic, that is found in the

midst of the Brazilian rainforest, attracts a varied cast of characters from around the world. Mané Pena, a local farmer and rubber tapper, is overtaken by international media attention thanks to his knowledge about the alleged healing powers of bird feathers; Tania and Bautista Djapan, small businesspeople from São Paulo, expand their pigeon courier service into the region and become the executives of a global information network on birdwings; Chico Paco, a young man from the Brazilian northeast coast who undertakes a pilgrimage to the Matacão, becomes the founder of a nationwide evangelical radio network; Jonathan Tweep, an overachieving US entrepreneur with three arms, visits the area so as to market the healing feathers; and he, in his turn, invites his major stockholder, Kazumasa Ishimaru, an immigrant from Japan who works as a line inspector on the Brazilian railroad system. These characters, with their divergent national, ethnic, religious and socioeconomic backgrounds, also bring different interpretations and knowledge parameters to bear on the Matacão, which becomes an industrial miracle resource parallel to oil or silicon before inducing a large-scale economic collapse. Mergers of nature and technology and of the body with new media are as common in Yamashita's novel as fusions between premodern and postmodern ways of life. Humorous and partly fantastic, Yamashita nevertheless effectively engages with the different facets of globalisation: international transfers of waste and of precious resources, capitalism and mom-and-pop businesses, racial and cultural hybridisation, worldwide networks of transportation and communication; all inform her portrayal of nature in an intensely interconnected world in which environmental ethics cannot be reduced to simply conceived local, national or global perspectives. Yamashita's unusual narrator, a small sphere of Matacão material attached to Ishimaru's forehead, embodies the voice of Earth itself even as it combines its global outlook with Ishimaru's more local viewpoint.

My presentation of a handful of texts that students tend to engage with easily should not, of course, be understood as a closed list. Poems such as Derek Walcott's *Omeros* (1992) or Adrienne Rich's *Atlas of the Difficult World* (1992), whose lyrical voices embody many different selves across history and around the globe, could easily be integrated into the syllabus of a class on globalisation and ecocriticism. The choice of individual texts may well be less crucial than an overall structure that integrates theories of globalisation,

transnationalism and cosmopolitanism with nonfictional prose as well as literary texts, since all three genres have served as important means of communication for environmentalist writers over the last two decades. The challenge in teaching this kind of material lies in keeping alive students' enthusiasm for environmental issues, even as the texts demonstrate that translating this enthusiasm into action may not be as easy as it seems. A cultivation of passionate interests in particular cultures outside one's own often proves a useful antidote to the paralysis that might ensue from the awareness of extreme complexity.

Note

1. For a useful survey, see Bertens (1995).

Works cited

A. Appadurai (1996) *Modernity at Large: Cultural Dimensions of Globalization* (Minneapolis: University of Minnesota Press).
U. Beck ([1986] 1992) *Risk Society: Toward a New Modernity*, trans. M. Ritter (London: Sage).
H. Bertens (1995) *The Idea of the Postmodern: A History* (London: Routledge).
D. Chakrabarty (2009) 'The Climate of History', *Critical Inquiry* 35, 197–222.
A. Ghosh ([2004] 2005) *The Hungry Tide* (Boston: Houghton Mifflin).
T. Glavin (2006) *The Sixth Extinction: Journeys Among the Lost and Left Behind* (New York: St. Martin's Press).
A. Gore (2006) *An Inconvenient Truth: The Global Emergency of Global Warming and What We Can Do About It* (New York: Rodale).
D. Guggenheim (dir.) (2006) *An Inconvenient Truth* (USA: Paramount).
M. Hertsgaard (1998) *Earth Odyssey: Around the World in Search of Our Environmental Future* (New York: Broadway Books).
B. Kingsolver (1998) *The Poisonwood Bible* (New York: HarperFlamingo).
E. Kolbert (2006) *Field Notes from a Catastrophe: Man, Nature, and Climate Change* (New York: Bloomsbury).
M. Lynas (2004) *High Tide: The Truth about Our Climate Crisis* (New York: Picador).
M. Montero (1995) *Tú, la oscuridad* (Barcelona: Tusquets).
———(1997) *In the Palm of Darkness*, trans. E. Grossman (New York: HarperCollins).
M.C. Nussbaum and J. Cohen (eds) (1996) *For Love of Country: Debating the Limits of Patriotism*. (Boston: Beacon Press).
D. Quammen (1996) *The Song of the Dodo: Island Biogeography in an Age of Extinctions* (New York: Scribner).

A. Rich (1992) *An Atlas of the Difficult World: Poems 1988–1991* (New York: W.W. Norton).
I. Sinha (2007) *Animal's People* (New York: Simon and Schuster).
L. Sklair (1991) *Sociology of the Global System* (Hemel Hempstead: Harvester Wheatsheaf).
S. Townsend (dir.) (2007) *Battle in Seattle* (USA: Screen Media).
D. Walcott (1992) *Omeros* (New York: Farrar, Straus and Giroux).
K.T. Yamashita (1990) *Through the Arc of the Rainforest* (Minneapolis: Coffee House Press).

9

The Return of the Animal: Presenting and Representing Non-Human Beings Response-ably in the (Post-)Humanities Classroom

Bart H. Welling and Scottie Kapel

> . . . Those who were sacred have remained so . . .
> . . . only the sight that saw it
> faltered and turned from it.
> An old joy returns in holy presence.
> (Denise Levertov, 'Come into Animal Presence' 1960)

The *return* of the animal?[1] We acknowledge that it may seem woefully naïve to herald the return of non-human creatures under present conditions, when they are worse off than they have been in some 65 million years (see Garrard 2004, p. 155). We also agree with Jacques Derrida that the Western idea of 'the animal' itself has contributed greatly to the plight of living animals (Derrida 2002).[2] But, as necessary as it is to raise our students' awareness about the global extinction crisis and about the historically unprecedented scale of industries in which animals suffer and die by the billions,[3] with countless negative ramifications for the biosphere, we believe that the ecocritical classroom can be an ideal place to discuss – and work towards – the return of the animal, for two reasons. First, some animals, such as the wolves of Yellowstone, actually *are* returning, however controversial and unfinished such projects may be. Second, over the past several years a rapidly growing body of work on the 'ethical question of the animal' (Wolfe 2003, p. 8) and on representations

of animals and animality in human cultures has been redefining 'the animal' and, in the process, challenging the anthropocentric foundations on which the humanities are built. Scholars like Cary Wolfe have even begun thinking in terms of the 'posthumanities': a set of new interdisciplinary formations that could radically transform the nature of a humanities education. 'The animal' is returning to the humanities (or, in some ways, entering them for the first time) in the form of essays, books, new journals, conferences, college classes, and degree specialisations (Wolfe 2009, pp. 564–566). This is not to say that the return of living animals is *always* aligned with the return of 'the animal'; some professors may choose to focus entirely on poetic animals as symbols of human traits, for instance, and avoid discussing living animals altogether (see Bergman 2002; Howard 2009; Armbruster 2008, p. 79 for critiques of the aestheticising and semiotic treatment of animals). However, these sorts of business as usual approaches to representations of animals in literature and other art forms – 'mere thematics', in Wolfe's words (2009, p. 568) – are looking increasingly unsustainable in light of all that we are learning about animals, animal–human relationships and human animality from scientists such as Barbara Smuts and Marc Bekoff, and theorists like Donna Haraway, Wolfe and the UK-based Animal Studies Group, among many others. And this is to say nothing of the ever-dwindling influence that the humanities seem to be having on societies which, if they are losing interest in the traditional Western literary canon, also happen to be teeming with pet owners, birdwatchers, wildlife documentary fans and other self-defined 'animal lovers'.

How, then, might we foster the redefinition of 'the animal', and possibly the return of animals, in and through environmental literature and animal studies classes? In what follows, we share some insights gleaned over the past six years in 'Wild Encounters', a modern literature and film class that Bart has taught 16 times in different versions at the University of North Florida and with which Scottie has been affiliated both as an undergraduate student and as a graduate teaching assistant. 'Wild Encounters' attempts to participate in the return of the animal(s) in two main ways: by presenting animals to students in the sense of making them *present* in literal, literary, bioregional and scientific terms, and by equipping students with analytical tools with which to make sense of the contemporary flood of visual animal imagery, essentially re-presenting these representations. After

surveying our efforts in these areas, we conclude with a few questions and thoughts as to how this kind of class might engage response-ably with other ways of knowing animals.

Presenting animals

It may sound elementary to begin each version of 'Wild Encounters' with a review of the Oxford English Dictionary's definitions of 'animal'. After all, how many university students expect to start a course examining a word that they have used without controversy since early childhood? However, this review quickly lays bare what has been so carefully concealed in mainstream culture's ways of thinking about animals: 'animal' is not merely an innocuous signifier for a non-human creature, but rather a word laden with ideological baggage and histories of hierarchical relationships. Or, as Animal Studies Group member Erica Fudge puts it in her excellent 2002 overview *Animal* (a book with which we have begun every section of 'Wild Encounters' to date): 'Rather than regarding animals as naturally other we can come to understand that they are always *constructed* as other, but that those constructions come to seem natural, true' (p. 163). Simultaneously defined as a creature endowed with 'the breath of life' and a soulless automaton, 'the animal' embodies a tension that justifies our use of animals as both commodities and companions. As Fudge observes, the contradictions hidden within our culture's definitions of 'animal' can have very real consequences in the world of actual human–animal cultures. By unpacking these contradictions, we help students approach the rest of the course (and, we hope, the rest of their lives) with an analytical eye equipped to recognise the human forces that naturalise relationships that are anything but biologically or historically inevitable.

Although this new way of conceiving of animals can be revelatory, it also has the potential to remain overly abstract, and even anthropocentric, if students have no way to apply it to their lives and test it against experiences with living animals. For our purposes in 'Wild Encounters', we find Marjorie Kinnan Rawlings's classic 1938 novel *The Yearling* to be of great value both for its remarkably sensitive depiction of animals and human–animal relationships and for its setting, which is essentially right on our doorstep in north Florida. The

animals in the book are creatures most of our students have seen before: raccoons, white-tailed deer and water moccasins, to name a few. The familiarity of the animal species and geographic markers in the text gives students a stake not just in our discussions of the book but in the environments it depicts, and the proto-bioregional ethic articulated by the novel offers students a sort of home base to return to when our texts enter unfamiliar conceptual terrain.

*Dis*orientation, of course, has its own virtues. The list of productively unsettling texts that Bart has adopted in the past includes Ernest Hemingway's surprisingly provocative *The Old Man and the Sea* (1952); James Dickey's novel *Deliverance* (1970), along with John Boorman's 1972 film adaptation of it; Charles Bergman's *Wild Echoes: Encounters with the Most Endangered Animals in North America* (1990); Sue Coe's nightmarish multimedia book *Dead Meat* (1996); Barbara Gowdy's elephant novel *The White Bone* and Linda Hogan's Florida panther-centred novel *Power*, both first published in 1998; J.M. Coetzee's hybrid lecture/novel *The Lives of Animals* (1999), with an especially useful afterword by Barbara Smuts; and Marc Bekoff's *Minding Animals: Awareness, Emotion, and Heart* (2002). Fudge's *Animal* sets up an invaluable intellectual framework through which students can make sense of animal representations in these works of fiction and non-fiction by defining key terms, modelling intelligent analysis of literature, film and popular culture, and exploring major debates on topics ranging from anthropomorphism to animal language experiments to xenotransplantation. In upper-division versions of 'Wild Encounters', Bart has also used the Blackboard system to provide students with a long list of scanned essays that further contextualise our discussions of Fudge's arguments.

We are strong proponents of using a class like 'Wild Encounters' to challenge students to rethink animals in their daily lives as well as in literature. Through 'Beast Blogs' (brief but thoughtful descriptions of animal encounters) and 'Field Notes' presentations (extended analyses of engagements with animals in various forms), our students are charged with interpreting their thoughts and reactions during these encounters, investigating the potential repercussions of their ways of thinking, and reflecting on how their reactions to animals might have changed since the beginning of the course. Students are encouraged to make their 'Field Notes' presentations as original as

possible, but the syllabus helps 'prime the pump' with options like the following:

- Try vegetarianism/veganism for a week and use your experiences to support an argument about how meat-eating or vegetarianism happens to be represented in a particular text.
- Check out a dog show/park and use your experience to help craft an original argument about the unique relationship between humans and dogs, particularly as it pertains to our readings.
- Take a night hike in the University of North Florida Nature Sanctuary, recording what you see, hear and feel. Then use the experience to test what one of our authors has written about being watched (Linda Hogan), 'becoming-animal' (Deleuze and Guattari) or even 'being prey' (Val Plumwood).
- Visit the zoo, circus or another place where animals are said to provide 'entertainment' or 'educational value'. Pay special attention to how the place structures our perceptions of human–animal relationships. If you go to the zoo, frame and analyse your experience using the work of John Berger, Nigel Rothfels, Randy Malamud, Dale Jamieson and other theorists on our list who have studied the history and ethics of zoos.
- Make your own *Discovery Channel*-style documentary about a given species and use your experience to help build an argument about the aesthetics and ethics of wildlife films.

Some of the most rich and transformative presentations have set out to challenge John Berger's famous claim, in his essay 'Why Look at Animals?' (1980), that 'Th[e] look between animal and man, which may have played a crucial role in the development of human society, and with which, in any case, all men had always lived until less than a century ago, has been extinguished' (1980, p. 26). Many students have argued that Berger's 'look', while lost or co-opted in many contexts, lives on elsewhere and can be recovered by city-dwellers and suburbanites willing to 'm[eet] the gaze of living, diverse animals and in response un[do] and re[do] themselves' and their knowledges (Haraway 2007, p. 21). These presentations support Denise Levertov's poetic argument ([1960] 1983, p. 23) that it is *humanity's* gaze that has 'faltered and turned from' animals, not vice versa; animals have never stopped looking at us, and something like the 'old joy' – not

to mention the old terror – that our ancestors felt in the presence of animals is still available to us, if we are only willing to look for it.

Re-presenting animals

From Disney films to the Animal Planet cable television channel to theme parks and zoos, we have all been raised on animal representations, and many students enter 'Wild Encounters' with the assumption that they are quite familiar with animals simply because of the inundation of animal representations in today's media. Unfortunately, many of these same students fail to recognise these visual representations *as* representations. In 'Wild Encounters' we re-present such images with the goal, first of all, of revealing some of the main human ideologies, narratives, tropes and conventions that shape them, and of preparing students to recognise these influences going forward.

Beginning with Disney's 1942 film *Bambi*, 'Wild Encounters' examines many visual representations of animals, looking beneath the surface to reveal how these representations can often teach us more about ourselves than about them, less about unique individuals and species than about 'the animal' and its basic inferiority. Animal documentaries, for instance, seem like an invaluable source of unmediated, purely objective views of animals, whether lions, whales or snails. These 'ecopornographic' assumptions are not hard to problematise (see Welling 2009). Students benefit greatly from applying worksheets on anthropomorphism and wildlife documentary conventions to scenes from films like *Winged Migration* (2001), whose beautiful 'natural' close-up shots of geese and other birds flying in formation were obtained using birds raised and trained by hand specifically for the film, and which also uses continuity editing, sombre music and other techniques to play on its audience's sense of sympathy for imperilled animals. *Winged Migration* suggests, for example, that one of its hard-working avian subjects, after being grounded on an African beach with a broken wing, had been caught and devoured by crabs, but (as the filmmakers confess in a DVD interview) the bird was rescued, and the crabs shown swarming over the 'bird' are actually eating a dead fish.

Students are surprised to learn not just how closely related the imagery and plots of nature documentaries can be to those of

animated films, but how differently the same animal image can be interpreted by diverse audiences. Interestingly, one 'Wild Encounters' student pointed out that a text adopted in some sections of the class, Jonathan Balcombe's *Pleasurable Kingdom: Animals and the Nature of Feeling Good* (2006), shares its cover photograph of two piglets nuzzling each other (a stock Getty image) with the cover of the menu at a local barbecue restaurant. While we side unapologetically with Balcombe's approach to animal happiness, we believe that students are best served by being taught to scrutinise all kinds of animal imagery carefully. This includes undercover slaughterhouse footage obtained by animal rights activists – particularly since, as the fate of the piglet photograph shows, the line between anthropocentrism and biocentrism in animal imagery can be exceptionally blurry.

Perhaps paradoxically, one of the most informative animal representations available today includes no footage of live animals at all. The Sundance Channel's series of very short 'handmade' television and Internet films, *Green Porno* and its spin-off *Seduce Me* – both written and directed by Isabella Rossellini, and starring the actress in a wide variety of animal roles – rely on heavily stylised puppets, costumes, sets and acting to dramatise the bizarre (by human standards) mating habits of other creatures, particularly members of non-charismatic species rarely featured in traditional documentaries. Hardcore Cartesians will surely balk at lines like 'Sadomasochism excites me' (which Rossellini delivers while costumed partly as a snail and partly as a naked human), but we would argue that the shows' dual emphasis both on the strangeness of animals' mating habits and on their evolutionary continuities with human physiology and sexual behaviour can make for an unusually productive classroom viewing experience.

As important as it is to denaturalise animal imagery, it is perhaps even more vital not to reduce the actual subjects of these representations to raw visual material that filmmakers and viewers can interpret however they see fit. 'Wild Encounters' resists the tendency to frame animals merely as passive victims of the representational process, will-less objects of humanity's ecopornographic gaze, by bringing innovative images like the paintings of the British duo Olly and Suzi into the classroom in conjunction with analyses of this kind of work by Erica Fudge and her Animal Studies Group colleague Steve Baker. By physically exposing their paintings to the animals they represent,

Olly and Suzi not only preserve traces (bite marks, smudges, paw prints) of actual 'wild encounters' with non-human beings, but call into question the one-way subject/object dynamic that Western culture generally assumes to obtain in representations of the non-human. After discussing Olly and Suzi's work, it can be hard to treat more conventional representations of animals as simple anthropomorphic mirrors of their makers and viewers. This observation even pertains to *Bambi*, not least of all because the film, like Disney's *The Lion King* (1994) and many of the other films that it inspired, combines heavily anthropomorphised characters and traits with more realistic imagery – imagery based, in the case of *Bambi*, on the physiology and behaviour of live animals that Walt Disney's animators spent months observing in the studio (Cartmill 1993, p. 169).

We further enrich our conversations about animal agency by introducing scenes from National Geographic's Crittercam documentaries, in which sea turtles, lions and other animals are enlisted by biologists as filmmakers in their own right, decked out with specially designed cameras in an effort to gather data that would be impossible for researchers to collect in person. Questions of agency – human as well as animal – also abound in connection with one of the most provocative films we have discussed in 'Wild Encounters', Werner Herzog's *Grizzly Man* (2005). The film documents the activist and amateur filmmaker Timothy Treadwell's life among coastal brown bears in Alaska over 13 consecutive summers, a life that ended when Treadwell and his friend Amy Huguenard were killed by one of the bears. In stark contrast to the typical 'when animals attack' style of documentary that could have been made using Treadwell's video footage, *Grizzly Man* stages a fascinating debate between Herzog and Treadwell's perspectives on animals and the more-than-human world. Their perspectives not only clash but feature numerous internal contradictions; Herzog chides Treadwell for anthropomorphising the bears, but himself accuses animals of 'fornication' and 'murder', while Treadwell is capable of whiplash-inducing transitions, from viewing himself as the bears' neutral observer one moment to describing himself as their 'master' a few seconds later. Examining these contradictions can help students reimagine both the seemingly transparent roles played by animals in documentaries and their own perspectives on living animals. We do not mean to offer alternative representations of animals like the Crittercam documentaries or

Grizzly Man as a panacea for what ails modern Western culture's ways of seeing animals; these films let numerous conventions go unchallenged, and, as Haraway notes in a chapter on Crittercam, questions about the 'semiotic agency of the animals in the hermeneutic labor' of these kinds of representations are 'simple to ask' but 'the devil to answer' (2007, p. 261). In Bart's experience, however, these kinds of questions have led effortlessly, if not to definitive answers, then to some of the richest classroom discussions of his teaching career.

From humanities to animalities

This essay has opened up many more questions than it can possibly begin to answer. For instance, it is smart to follow Wolfe's example by interrogating the 'humanist schema of the knowing subject' that limits animal studies scholarship's revolutionary potential, but how does this carry over to our teaching in a discipline which, as Susan McHugh observes, 'in many ways appears organised by the studied avoidance of just such questioning' (Wolfe 2009, p. 569)? On a practical note, how you do 'teach like an animal' in a classroom from which non-human beings have been deliberately excluded, in an institution where you are required to give tests, evaluate papers, issue final grades and perform various other all too human duties? What are the best ways of handling resistance and 'anthropodenial' (the 'a priori rejection of shared characteristics between humans and animals', de Waal 2001, pp. 68–69) on the part of students and university colleagues? How do you teach about animals in a way that is response-able to other disciplines, especially scientific fields – for example, neither deferring to biology for purely objective and definitive explanations of what animals are and do, nor overestimating the role that anthropocentrism and anthropodenial have played in science's approaches to animals? How do you engage response-ably with the philosophy of animal rights?

Scholarly interest in animal studies pedagogy is growing, as evidenced by Charles Bergman's 2002 article 'Academic Animals: Making Nonhuman Creatures Matter in Universities', Karla Armbruster's essay 'Thinking with Animals: Teaching Animal Studies-Based Literature Courses' (2008) and the recent collection *Teaching the Animal: Human-Animal Studies across the Disciplines* (2010), all of which we would encourage readers to consult as they try to work out answers

to the difficult questions raised above. In the humanities, though, we have much to learn from our counterparts in the social sciences when it comes to assessing whether our animal studies classes *are*, indeed, as 'transformative' for our students as they have been for us. We have gathered ample anecdotal evidence in 'Wild Encounters' to support this claim (for example, in the form of post-course narrative evaluations), but how might we more precisely measure transformations in our students' ways of thinking about animals? And how could we possibly gauge the impact that our classes may be having on actual animals?

One way to approach these problems, as suggested by Margo DeMello in her introduction to *Teaching the Animal*, is to administer the psychologist Hal Herzog's popular 'Animal Attitudes Scale' to students at the beginning and end of a course. In a class like 'Wild Encounters', however, it would not be enough simply to *administer* the scale, since animal studies emphasises thinking critically about everything, including the discourses of animal welfare, and Herzog's instrument tends to oversimplify what a 'pro-animal welfare attitud[e]' might look like. It assumes, for instance, that someone harbours anti-animal welfare sentiments if they agree with the statement: 'There is nothing morally wrong with hunting animals for food' or disagree with the statement: 'The use of animals in rodeos and circuses is cruel'. Animal studies courses in the humanities would have a field day with the Eurocentric, classist and other biases embodied in the former question, which unconsciously gestures towards a problematic tradition in which 'humane' attitudes towards animals are bound up with misanthropic, xenophobic and sometimes even genocidal attitudes towards groups of humans who are othered by virtue of their 'inhumane' treatment of non-human beings. By the same token, many animal studies teachers would want to historicise and otherwise complicate the latter question ('Are we talking about caged tigers or performing dogs?'). Still, it would make perfect sense to discuss Herzog's scale with students and adapt it with these kinds of concerns in mind; Herzog himself has welcomed modifications to the scale. Just as the humanities have the potential to reinvigorate the contemporary animal welfare movement by teaching large groups of students to think more critically about the place of animals in human cultures over time, the social sciences' emphasis on animal welfare can help keep us from getting bogged down in theoretical

esoterica that our students are likely to find boring, if not downright useless. And a new scale, focusing on student perceptions of animal *representations*, would certainly be in order. For example, such a tool might complement Herzog's ninth prompt – 'Basically, humans have the right to use animals as we see fit' – with a statement centering on the textual origins of this attitude, in the West, in Holy Writ: 'These verses from the book of Genesis in the Christian Bible give humans the right to use animals however they like: "And God said, . . . let them have dominion over the fish of the sea . . . " '. This type of approach would help us address an issue that is just as pressing in animal studies as it is in ecocriticism: whether (or how) thinking critically about our representations of, and relationships with, the non-human might translate to more sustainable, ethical and even graceful ways of living on Earth.

The questions we have raised here will undoubtedly be fuelling debate and leading to productive interdisciplinary collaborations for a long time to come. Crucially, as the humanities give birth to the post-humanities – or (why not?) the 'animalities' – we should remember that these debates and collaborations need not be confined to academic conferences, faculty lounges and the pages of journals that most of our students will never read. The 'animalities' classroom can be an ideal place for mutually transformative dialogue not just about animals, but about what it means to *be* an animal in a world full of other life forms. For students not majoring in biology, it may be the only place in the university where such a dialogue can be found. But science students can also benefit from trying out new ways of seeing – along, perhaps, with some very old ones. While it would be intellectually irresponsible simply to ignore Descartes, Bacon and the other 'usual suspects', and pretend that we can regain access to precisely the same knowledge of animals that the lives of our pre-Cartesian ancestors revolved around and depended on, it is nonetheless important to consider that what Gary Snyder has called 'the most archaic values on earth' may not all be dead (cited in Felstiner 2009, p. 352). In fact, cultivating these values in our students and ourselves, as informed by the latest developments in the natural sciences, the social sciences and animal studies theory, may be one of the most important enterprises in which we can participate, as we continue to call not only for the return of animals but for the cultures we inhabit to return to them.

Notes

1. We would like to thank Charles (Chuck) Bergman for unwittingly suggesting this title during an e-mail exchange, but most of all for inspiring our students and faculty colleagues during a visit to the University of North Florida in April 2010. Chuck's book *Wild Echoes: Encounters with the Most Endangered Animals in North America* has been a regular presence in Bart's 'Wild Encounters' class for years – indeed, the name of the class was borrowed from the book – and many of the claims we make here have been shaped by it. Several other scholars deserve thanks for their timely assistance, including Karla Armbruster, Lori Gruen, Annie Potts and Carrie Rohman.
2. Many scholars have discussed the implications of this claim; Cary Wolfe writes that the publication of the essay in which it appeared, 'The Animal That Therefore I Am (More to Follow)', is 'arguably the single most important event in the brief history of animal studies' (2009, p. 570).
3. The Animal Studies Group's introduction to their collection *Killing Animals* offers a truly mind-blowing statistical overview of the numbers of animals that are currently being 'gassed, electrocuted, exterminated, hunted, butchered, vivisected, shot, trapped, snared, run over, lethally injected, culled, sacrificed, slaughtered, executed, euthanized, destroyed, put down, put to sleep, and even, perhaps, murdered', all on a scale that simply 'has no historical precedent' (2006, pp. 3–4).

Works cited

The Animal Studies Group (2006) *Killing Animals* (Urbana: University of Illinois Press).

K. Armbruster (2008) 'Thinking with Animals: Teaching Animal Studies-Based Literature Courses', in *Teaching North American Environmental Literature*, ed. Laird Christensen, Mark C. Long, and Fred Waage (New York: Modern Language Association), 72–90.

J. Berger (1980) 'Why Look at Animals?', in *About Looking* (New York: Pantheon), 1–26.

C. Bergman (2002) 'Academic Animals: Making Nonhuman Creatures Matter in Universities', *Interdisciplinary Studies in Literature and Environment* 9:1, 141–147.

M. Cartmill (1993) *A View to a Death in the Morning: Hunting and Nature through History* (Cambridge, MA: Harvard University Press).

M. DeMello (ed.) (2010) *Teaching the Animal: Human-Animal Studies across the Disciplines* (New York: Lantern Books).

J. Derrida (2002) 'The Animal That Therefore I Am (More to Follow),' trans. David Wills, *Critical Inquiry* 28:2, 369–418.

J. Felstiner (2009) *Can Poetry Save the Earth? A Field Guide to Nature Poems* (New Haven, CT: Yale University Press).

E. Fudge (2002) *Animal* (London: Reaktion Books).

G. Garrard (2004) *Ecocriticism* (New York: Routledge).
D. Hand (dir.) (1942) *Bambi* (USA: Walt Disney).
D. Haraway (2007) *When Species Meet* (Minneapolis: University of Minnesota Press).
H. Herzog (1991) 'Animal Attitudes Scale', http://paws.wcu.edu/herzog/research.html, accessed 18 October 2010.
J. Howard (2009) 'Creature Consciousness', *The Chronicle Review*, http://chronicle.com/article/Creature-Consciousness/48804, accessed 8 September 2010.
D. Levertov ([1960] 1983) 'Come into Animal Presence', in *Poems, 1960–1967* (New York: New Directions).
J. Shapiro and I. Rossellini (dirs) (2008) 'Snail' from *Green Porno*, http://www.sundancechannel.com/greenporno/, accessed 8 September 2010.
F. de Waal (2001) *The Ape and the Sushi Master: Cultural Reflections by a Primatologist* (New York: Basic Books).
B. Welling (2009) 'Ecoporn: On the Limits of Visualizing the Nonhuman', in *Ecosee: Image, Rhetoric, Nature*, ed. S.I. Dobrin and S. Morey (Albany: State University of New York Press), 53–77.
C. Wolfe (2003) *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago: University of Chicago Press).
———(2009) 'Human, All Too Human: "Animal Studies" and the Humanities', *PMLA* 124, 564–575.

10
Reading and Writing Climate Change

Hayden Gabriel and Greg Garrard

Powered by fossil fuels, the embarrassment of riches generated by modern industrialised societies has had the unintended – and now well-documented – effect of greatly increasing the concentration of CO_2 and other 'greenhouse gases' in the atmosphere, leading to 'global warming'. Given the predominantly scientific treatment the subject has received – centred upon the Intergovernmental Panel on Climate Change (IPCC) – it might appear that the role of literary writing would be either mimetic (writing novels that represent climate change) or exhortatory (writing non-fiction that communicates climate science with passion and urgency). Literary criticism would then be tasked with assessing how accurately climate change had been represented in particular texts and how useful they might be in the 'fight' against 'climate chaos'. Importantly, though, a much wider range of critical and creative responses is both possible and desirable if narrative and critique are to form part of the 'coherent and useful response[...] to climate crisis' which Richard Kerridge highlights as the driving force behind ecocritical engagement (1998, p. 5).

Clearly, narrative has played its part in bringing Earth's living entities to our collective current predicament. No narrative is produced within a cultural vacuum, but necessarily has embedded within it the ideological values of the culture from which it has emerged. 'Our lives are shaped by the stories we hear as children', observes Carolyn Merchant in *Reinventing Eden: The Fate of Nature in Western Culture*, 'some fade as we grow older, others are reinforced by our families, churches and schools. From stories we absorb our goals in life, our morals and our patterns of behavior' (Merchant 2004, p. 3).

Key elements of the *grand narratives* which traditionally permeate and inform the narratives of Western culture, those of patriarchy, colonialism and religion, place the needs of mankind – or at least the needs of the white-skinned, Western male – at their centre, while assuming and venerating the right to acquire, dominate and conquer. Such anthropocentric myths are both ethically enervating and amazingly resilient to transformation by mere facts, as S.K. Robisch has shown in his epic study of the misrepresentation, both Romantic and demonising, of wolves in American culture (2009).

Feminism, the dismantling of empire and the advent of Darwinism, respectively, have to a degree displaced these grand narratives, yet still little consideration is given in our narrative output to climate crisis or the needs of non-human species. Even though we find ourselves, according to David Attenborough, 'at the very brink of an extinction event' of the magnitude that saw the demise of the dinosaur 65 million years ago (Broome 2000), insufficient attention is paid to the fragility of ecosystems which sustain all species – including our own – and which human demands are pushing to the point of malfunction. The academic 'humanities' have, as their name might imply, tended until recently to confirm rather than to confront this bias.

Climate change poses particular problems for the humanities classroom, including the problems of science and scepticism; apocalypse and apathy; the limitations and possibilities of existing cultural genres; and the imaginative difficulties posed by the spatial and temporal scale of climate change. While clearly there can be no universal or perfect solution to these challenges, it may be that a pedagogical toolkit can be assembled over time that will help teachers to tackle them constructively. The mimetic and exhortatory still have a role to play in reading and writing climate change, but ecocentric teaching and writing needs to extend beyond these tasks towards a fundamental reconceptualisation of climate change and the human relationship to – and engagement with – ecosystems.

This essay offers a step in that direction.

Science and scepticism, apocalypse and apathy

The IPCC has, in its series of reports (1990, 1995, 2001, 2007), produced a consensus from the mass of climatological research and

modelling, which states in its most recent executive report that '[w]arming of the climate system is unequivocal' and that '[m]ost of the observed increase in global average temperatures since the mid-twentieth century is *very likely* [confidence greater than 90%] due to the observed increase in anthropogenic [greenhouse gas] concentrations' (IPCC 2007 Synthesis Report).

Despite the weight of evidence, few scientific issues have been as vigorously contested as climate change. In part this is thanks to a concerted campaign of misinformation by the anti-environmentalist right, mainly in the US, designed to cultivate doubt in the minds of voters using tactics honed in previous battles over asbestos, passive smoking, CFCs and evolution. The influence of 'think tanks', such as the Cato and Discovery Institutes, upon public opinion is far from negligible, yet there are also important areas of legitimate scientific disagreement and uncertainty. Besieged by such a welter of highly polarised claims and counter-claims, humanities students could be forgiven for feeling poorly equipped to take part in the debate.

An additional problem is that climate change is so often framed by environmentalists in apocalyptic terms: James Lovelock (2006) has warned of *The Revenge of Gaia*, while Fred Pearce (2006) addresses us as *The Last Generation*. Irrespective of whether the science supports the most extreme projections of societal and ecological collapse, apocalyptic rhetoric risks inducing debilitating apathy, rather than engagement and participation, in students (Garrard 2004, pp. 85–107). In such guises, environmentalism seems to promise privation and restraint, rather than new possibilities of pleasure and freedom, and there are few who are likely to relish what Paul Hawken has called a 'lifelong celery diet' (see Garrard 2007, p. 375). Consequently, it may be difficult for tutors in this field to maintain and present a balanced perspective: one that makes room both for the language of hope, solidarity and sustained work, and the crisis talk of 'battles' and 'disasters'.

Means by which these issues are addressed will, of course, depend upon the focus of the module and tutors concerned. One approach might be to set or recommend a brief, authoritative introduction to the science (for example, Maslin 2004). Another is to establish through documentation beforehand, and reiterate at the commencement of study, the ethos of a given module as explicitly 'green', so that climate change is taken as read. Such an approach leaves

students free to concentrate fully on the study of a range of environmental texts, analysing the way in which man and nature are variously positioned, before attempting 'ecocentric' writing which reconsiders and repositions that vital relationship. At the centre of such work will be the consideration of what might constitute 'a mature environmental aesthetic' (Buell 1995, p. 32) and how we might 'find a discourse that can both celebrate *and* take some responsibility for nature without false consciousness' (Gifford 1999, p. 148).

A third approach would be to work from the assumption that disagreements about climate change run much broader and deeper than disputes within and around climatology. According to Mike Hulme, a veteran of the IPCC:

> The traditional 'deficit' model of science communication is no longer tenable. . . . Neither can it be argued that more scientific *certainty* about future climate change, or better representations of scientific *uncertainty*, will necessarily lead to greater public agreement . . . There are barriers other than lack of scientific knowledge to changing the status of climate change in the minds of citizens. (2009, p. 215)

As Hulme's discussion shows, it is inconceivable that further and better science will eliminate disagreements. Moreover, because 'climate' is 'an idea of the imagination' (p. 340) profoundly embedded within our cultural traditions, we might find it more productive to 'see what climate change can do for us rather than what we seek to do, despairingly, for (or to) climate' (p. 341). The creative and analytical work of ecocriticism, then, might also include variants upon the prophetic mode, or jeremiad, which seek to prevent or avoid catastrophic climate change, and variants upon the comic mode (Meeker 1997), which emphasise mitigation, adaptation and even a degree of acceptance.

While every educator has both the right and the responsibility to espouse and embody their personal values, seeing climate change as a pedagogical *opportunity* provides ecocriticism with a more generous remit than providing PR for the IPCC. Just as there are significant 'no regrets' policies that will yield greenhouse gas reductions alongside other social and environmental desiderata with minimal costs, so there are pedagogical strategies that will encourage students into

a richer, more complex sense of the meaning and significance of 'climate change' regardless of their personal take on the science.

Climate change genres

Representing climate change poses serious problems for established cultural genres. For instance, John Lanchester has pointed out the absurdity of treating it as one news topic among others:

> There is a kind of falsehood built into this; at the very least, a powerful degree of denial. If global warming is as much of a threat as we have good reason to think it is, the subject can't be covered in the same way as church fêtes and county swimming championships. I suspect we're reluctant to think about it because we're worried that if we start we will have no choice but to think about nothing else. (2007)

Similarly, achieving 'balanced' coverage by interviewing one scientist from each side of the argument misrepresents the overwhelming proportion of climate scientists who endorse the IPCC position.

Richard Kerridge, much of whose work addresses the problem of genre, concludes his review of non-fictional climate crisis literature with the comment that, for all the scientific support writers like Lovelock and Pearce provide for their apocalyptic warnings, they seem not to be 'able to offer much recognition of the emotional effect they are likely to have on readers, or minister to those emotions' (2009, p. 148). Their prognoses seem at odds with the restrained impersonality of the authorial voice their genre requires. On the other hand, books of nature writing such as Roger Deakin's *Waterlog* make space for the indulgence of emotional and corporeal 'green pleasures' as alternatives to those offered by consumerism, taking a subtly political stance by inviting readers to engage in such an elemental activity as wild water swimming – an invitation many readers have gladly accepted. As Kerridge points out, though, the emphasis on ecocentric pleasures of the flesh might be hard to reconcile with the urgency of which Lanchester writes.

For Ursula Heise, representing climate change is a test case for the 'sense of planet', or ecocosmopolitanism, which she proposes as an alternative to the largely irrecoverable 'sense of place' idealised by earlier ecocritics. She observes that it 'poses a challenge for

narrative and lyrical forms that have conventionally focused above all on individuals, families or nations, since it requires the articulation of connections between events at vastly different scales' (2008, p. 205). She points out that people do not experience climate, they experience weather, some of which, in some places, is likely to seem *better* to local residents as global temperatures increase. By contrast, apocalyptic fictions misrepresent the impacts of climate change as uniformly dire.

Identifying and exploring in detail the ways in which various genres, from TV news through Hollywood cinema to literary fiction and poetry, are struggling to represent adequately the scale and complexity of global climate change is a necessary component of any ecocritical pedagogy. However, it is equally important not to appear merely to carp from the sidelines: the achievements as well as the limitations of existing books and films must be acknowledged, and none will ever be perfect. Furthermore, the potential for reinvention or transformation of genres under the pressure of climate crisis should be seen as opportunities for writers and critics. Thus Carolyn Merchant proposes 'a remything of the Edenic Recovery narrative or the writing of a new narrative altogether' (2004, p. 242), while in *The Transition Handbook* Rob Hopkins cites Tom Atlee who

> writes of creating what he calls an 'alternative story field'. This in essence is creating new myths and stories that begin to formulate what a desirable sustainable world might look like. (Hopkins 2008, p. 94)

Practising utopian fiction is difficult without an excess of 'telling' rather than 'showing', as a visitor is invariably subjected to demonstrations of the brave new world, but might be less likely to breed apathy than dystopian or apocalyptic genres. In any case, questioning genres from either the writer's or the critic's point of view will help to highlight their significance for environmental representation generally and for climate change in particular.

Transformative teaching

A useful pedagogical framework for transformative teaching, which aims both to enlighten and empower, is to be found in Steve

Pratchett's 'Curriculum Model to Underpin Education for Sustainable Development' (2009, p. 26). Pratchett's four-part schematic – *awareness, analysis, evaluation and participation* – lends itself readily to ecocritical and ecocentric writing courses, which aim to raise students' environmental and literary *awareness*; to *analyse* and *evaluate* texts using criteria for environmental literature; and to invite students to *participate* in the writing and criticism of literary works which are demonstrably orientated to the environment and ecology.

In addition to using Pratchett's template to plan class activities, Lawrence Buell's four criteria for environmental literature (1995, p. 7) can be placed in the hands of students from the outset and applied in the very first seminar to a range of short texts or extracts. Which texts do – and which do not – meet them can bring surprises. Charting findings on a 'Buellograph' – a bar graph, used tongue-in-cheek at this early stage, with text titles on the horizontal axis and numbers one to four on the vertical – allows visual recording and review of which texts are most efficacious in Buell's terms. Keats's 'To Autumn' might score a resounding four; an extract from Wordsworth's 'The Prelude' a hotly disputed single point. With these and other texts – a passage from a Hardy novel, perhaps; an extract from Graham Swift's *Waterland* (2010) – small groups of students apply Buell's criteria and present their findings to class. In this way, students who enter the room never having heard of ecocriticism leave it having wielded an ecocritical framework and having taken part in an ecocritical presentation.

The following list of exercises, sketched out using Pratchett's schematic, includes both climate-specific work and more generic ecocritical activities so as to avoid the risk of 'climate fatigue'. The key objective is to facilitate informed critical and creative responses to climate change and ecosystemic ontology.

Awareness

Read the criteria proposed by Buell (see above) for environmental literature and Gifford (2006, pp. 31–35) for 'post-pastoral' writing.

Analysis and evaluation

What sort of challenges do the criteria imply for the critic and for the writer? Are the criteria too broad, or too narrow? Can you think

of many (or even any) canonical works of literature that satisfy all or most of either of the lists?

Participation

- Rephrase either Buell's or Gifford's criteria to make them useful for evaluating climate change fiction and films.
- Collaborate to produce outline lists of the main characteristics of some popular genres of literature or film. Then see which ones can plausibly be altered so as to represent climate change. What are the limitations you encounter? Are they at the level of plot, setting or characterisation?
- Taking inspiration from Jorge Borges's habit of writing reviews of imaginary novels rather than actually writing them, write a substantial review of a non-existent film or novel that would fit your criteria whilst also potentially providing entertainment for a mainstream audience.

Awareness

Read Robert Macfarlane's *The Wild Places* (2007).

Analysis and evaluation

Identify some of the many instances of 'timescape' (Adam 1998) within Macfarlane's text and evaluate how they operate.

Consider critically the various perceptions of wilderness the text explores:

> [That which Roger Deakin observed] had made me see how wedded my old sense of the wild was to an ideal of tutelary harshness – to the scourges of rock, altitude and ice. Down in the gryke, though, I had seen another wildness at work: an exuberant vegetable life, lusty, chaotic and vigorous. (Macfarlane 2007, p. 176)

How different are these 'wildernesses'? Which seem the most recognisable, appealing and immediate to you?

Participation

- Produce a narrative in which an awareness of 'wildness' as a process of 'exuberant vegetable life, lusty, chaotic and vigorous'

(Macfarlane 2007, p. 176) is experienced by a protagonist in an epiphany featuring 'awe in attention to the natural world' (Gifford 2000, p. 221).
- Consider the landscape on which the classroom has been built, or an area you know well which is significant to you. Research and imagine what this location would have been like 100, 1000 and 10,000 years ago. Write a narrative account of the site from a non-human perspective that incorporates more than one timescale.
- Basing your account on the projections in the most recent IPCC report, extend your non-human perspective of your current site 100 or 200 years into the future.

Awareness

Read H.D. Thoreau's *Walden* (1999) and Jon Krakauer's *Into the Wild* (2007) and watch the DVD *Into the Wild* (Penn dir. 2007).

Analysis and evaluation

Consider Buell's suggestion for the need to 'develop a mature environmental aesthetic' (1995, p. 32). What might such an aesthetic be? How does this concept relate to these texts?

Participation

- Write a narrative in which a protagonist is brought to a sense of 'mature environmental aesthetic' (Buell 1995, p. 32).
- Construct a poem around a 'moment of being' in which 'human interest is not understood to be the only legitimate interest' (Buell 1995, p. 32).
- Write a letter as 'Wayne' to 'Christopher McCandless', confronting or satirising McCandless's environmental aesthetic.

Awareness

Watch *An Inconvenient Truth* (Gugenheim dir. 2006); *The Age of Stupid* (Armstrong dir. 2008) and *The Day after Tomorrow* (Emmerich dir. 2004).

Analysis and evaluation

What are the emotional contours of each film – the shifting foci of concern and sympathy – and how does the director manipulate

them? As consumers of these films, how are you addressed and positioned? Debate which film seems the most likely to be persuasive, concluding with a class vote.

Compare the futures imagined, depicted or projected in each film with the latest synthesis of the IPCC Assessment Report (AR4 at time of writing). Which film conforms most closely to the findings of the IPCC? Is the most accurate film also the most effective?

Participation

- Research and write a vignette of consumerist 'stupidity' based on the animated sections with voice-overs by children in *The Age of Stupid*. Then do the same for 'ingenuity'.
- As an alternative to the bleak outlook of these films, produce a narrative depicting the struggle to attain 'what a desirable sustainable world might look like' (Hopkins 2008, p. 94).

Awareness

Read the speech attributed to Chief Seattle (Furtwangler 1997), watch the DVD *Natural World – Earth Pilgrim* (Graham-Brown dir. 2008) and access the Millennium Ecosystem Assessment (2003) website.

Analysis and evaluation

Explore, compare and contrast the cultural origins of the texts and the way in which they position themselves in relation to nature, landscape and the reader.

Participation

- Write a reply to Chief Seattle that responds respectfully to his contrasts of Native American and Euro-American ways.
- Write an environmentally focused letter from an aged great-grandparent to be read by their newborn great-grandchild when s/he attains the age of 18 which explores the human place within an ecosystemic 'network of relations' (Bate 2000, p. 107).
- Focus on that which Mitchell Thomashow terms 'biospheric perception' (2002: 17). 'Take a few moments to reconsider where you are', Thomashow exhorts, 'notice the sky, the landscape and other life forms. In just a few thought moments you can travel a considerable conceptual distance through the biosphere' (2002: 17). Describe 'where you are' in concentric circles 1 m, 100 m,

1 km and 10 km in radius, using Google Earth as well as maps and personal exploration (perhaps by bicycle) to access the larger scales.

Awareness

Read Naomi Oreskes and Erik M Conway's *Merchants of Doubt* (2010).

Analysis and evaluation

Search the Internet for blogs or comment threads where the climate debate is taking place. How many of the 'sceptical' arguments can you find from Oreskes and Conway's book?

Climate sceptics often claim that IPCC scientists too have vested interests. Research some of the lead authors of the most recent IPCC Assessment Report. Do they work for an environmental NGO, a publicly funded university or an industry-funded 'think tank'? Does it make a difference?

Participation

- Cut and paste a substantial selection of comments representing consensus and sceptical positions from blogs into Wordle (wordle.net). What are the key terms? Now construct a Wordle cloud from the words that most closely represent your own view.
- Mike Hulme quotes the following as the epigraph to *Why We Disagree about Climate Change*: 'A good place to look for wisdom . . . is where you least expect to find it: in the minds of your opponents' (Jonathan Haidt). Whatever your own view about climate change, write a letter to yourself expressing the wisdom in the view that opposes it.
- It is likely that climate change will have much more severe impacts upon poorer people. Write a futuristic travel narrative by a wealthy traveller visiting a badly affected area.

Works cited

B. Adam (1998) *Timescapes of Modernity: Environment and Invisible Hazards* (London: Routledge).
F. Armstrong (dir.) (2008) *The Age of Stupid* (Dogwoof Studio).
J. Bate (2000) *The Song of the Earth* (London: Picador).
K. Broome (dir.) (2000) *The State of the Planet* (BBC).

L. Buell (1995) *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, MA: Harvard University Press).
R. Carson (2000) *Silent Spring* (London: Penguin).
R. Emmerich (dir.) (2004) *The Day After Tomorrow* (Twentieth Century Fox).
A. Furtwangler (1997) *Answering Chief Seattle* (Washington: University of Washington Press).
G. Garrard (2004) *Ecocriticism* (London: Routledge).
———(2007) 'Ecocriticism and Education for Sustainable Development', *Pedagogy* 7:3, 359–383.
T. Gifford (1999) *Pastoral* (London: Routledge).
———(2000) 'Pastoral, Anti-pastoral, Post-pastoral', in *The Green Studies Reader*, ed. L. Coupe (London: Routledge).
———(2006) *Reconnecting with John Muir* (Athens, GA: University of Georgia Press).
A. Graham-Brown (dir.) (2008) *Natural World – Earth Pilgrim* (BBC).
D. Gugenheim (dir.) (2006) *An Inconvenient Truth* (Paramount).
U. Heise (2008) *Sense of Place and Sense of Planet* (Oxford: Oxford University Press).
R. Hopkins (2008) *The Transition Town Handbook* (Totnes: Green Books).
M. Hulme (2009) *Why We Disagree about Climate Change* (Cambridge: Cambridge University Press).
IPCC (2007) *Climate Change 2007: Synthesis Report, http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm*, accessed 3 August 2011.
R. Kerridge (ed.) (1998) *Writing the Environment* (Vancouver: Zed Books).
———(2009) 'Green Pleasures', in *The Politics and Pleasures of Consuming Differently*, ed. K. Soper, M. Ryle, and L. Thomas (Basingstoke: Palgrave).
J. Krakauer (2007) *Into the Wild* (London: Pan).
J. Lanchester (2007) 'Warmer, warmer', *London Review of Books* 29:6, 3–9.
J. Lovelock (2006) *The Revenge of Gaia* (London: Allen Lane).
R. Macfarlane (2007) *The Wild Places* (London: Granta).
M. Maslin (2004) *Global Warming: A Very Short Introduction* (Oxford: Oxford University Press).
J. Meeker (1997) *The Comedy of Survival: Literary Ecology and a Play Ethic* (3rd edn) (Tucson: University of Arizona Press).
C. Merchant (2004) *Reinventing Eden: The Fate of Nature in Western Culture* (New York: Routledge).
Millennium Ecosystem Assessment (2003) *Millennium Assessment Reports http://www.maweb.org/en/Index.aspx*, accessed 3 August 2011.
N. Oreskes and E.M. Conway (2010) *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (London: Bloomsbury).
F. Pearce (2006) *The Last Generation* (London: Eden Project).
S. Penn (dir.) (2007) *Into the Wild* (Paramount Home Entertainment).

V. Plumwood (1993) *Feminism and the Mastery of Nature* (London: Routledge).
S. Pratchett (2009) 'A Model for Sustainable Development', *Primary Geographer* 68:25–7.
G. Swift (2010) *Waterland* (London: Picador).
M. Thomashow (2002) *Bringing the Biosphere Home* (Cambridge, MA: MIT Press).
H.D. Thoreau (1999) *Walden* (Oxford: Oxford University Press).

Part III
Green Cultural Studies

11
Teaching Green Cultural Studies and New Media

Anthony Lioi

The year is 2007, and I stand before the students in my environmental humanities class and introduce *Pride of Baghdad*, a graphic novel by Brian K. Vaughan and Niko Henrichon. *Pride of Baghdad* tells the story of a group of lions from the Baghdad Zoo who lived and died through the American siege of the city in the first years of the Iraq War. Though the lions speak in human words, they are drawn in a realistic style with roots in nature documentary to denote the historical truth of the tale (see BBC News 2003). As I prepare to unleash a brilliant thought about zoos, empire and humanity as political animal, a student raises her hand and asks, 'Professor, why are we reading a story with pictures in it?' Having been apprised of the digital proclivities of the millennial generation, I am taken aback. I am used to justifying the intellectual and aesthetic value of popular culture to my own teachers, who may be forgiven the prejudices of the Frankfurt School – 'mass culture rots your brain' and so on – in honour of the good fight of 1968 and beyond. I am less prepared to forgive their children, whose near-constant exposure to animation, digital hypertext and the myriad forms of contemporary media should have inoculated them against this kind of reaction. But, as Pierre Bourdieu and Jean-Claude Passeron remind us, cultural ubiquity does not translate smoothly into cultural capital (1990). In this essay, I will explore the problem of teaching new media to ecocritical ends, not only as a puzzle for classroom pedagogy, but as a challenge to the Arnoldian structures of the ecocritical canon itself. There should be a good answer to the question about stories with pictures in them.

In *Convergence Culture: Where Old and New Media Collide*, Henry Jenkins claims that our relationship to contemporary media is being shaped by three forces: convergence, participatory culture and collective intelligence. By *convergence*, he means 'the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behaviour of media audiences who will go almost anywhere in search of the kind of entertainment experiences they want' (Jenkins 2006, p. 2). By *participatory culture*, he means the transformation of older modes of passive spectatorship into modes of audience participation, judgement and world-building, especially through fan cultures (pp. 2–3). By *collective intelligence*, he means the way consumers of media pool their knowledge and skills to create greater understanding and influence over media production itself, as when viewers vote during *American Idol* or when customer reviews on Amazon.com drive sales in defiance of professional critics (p. 3). As an example of these forces coming together, he cites the 'Bert Is Evil' incident from 2001, in which a Filipino high school student, Dino Ignacio, used Photoshop to juxtapose an image of the Muppet Bert from *Sesame Street* with an image of Osama bin Laden. He then uploaded the new image to the Internet, where it was downloaded by activists in Bangladesh and reproduced as a protest sign during anti-American rallies throughout the Middle East. When CNN covered one of these rallies, the picture of Bert with bin Laden came to the attention of the producers of *Sesame Street*, the Children's Television Workshop, thereby creating an international scandal. Jenkins employs the case of 'Bert Is Evil' to assert that, while convergence does happen accidentally, as an epiphenomenon of the structure of new media, its power to shape perception, judgement and politics should be harnessed purposefully, especially by educators who interact with so-called 'digital natives' as they mature into adult consumers and citizens. What follows is a first attempt to adapt these insights about convergence culture to the teaching of green cultural studies in higher education.

Before I do that, however, I would like to say a word about the current state of popular culture in US ecocriticism. Given the ocean of nature films, television series and websites, it is remarkable that American ecocritics have had so little to say about them in our published research.[1] Though my theory cannot be substantiated in the space of this brief essay, I believe that this lack of critical attention can

be explained through the history of ecocriticism itself. Ecocriticism in the United States began by defending a related set of genres – nature writing, wilderness literature and natural history – as well as a kind of ethical and political engagement, and as well as a group of regional loyalties – to the West, to the countryside, to farming and mining communities – against an urban, Eastern elite that believed these concerns were beneath its notice, if not antithetical to the project of modernity. An effort was necessary to defend 'the best of what has been thought and said' – Matthew Arnold's definition of 'culture' – about the environment. Ecocriticism therefore inserted itself into an argument about major and minor literary materials, canonical worth and universal cultural significance that it is still fighting. This is an honourable conflict, but by operating in an Arnoldian mode, ecocriticism committed itself to the defence of its own version of high culture. As a result, new media and popular culture have been given scant attention because it is impossible to defend even the best video game against the charge that it is less respectable, in traditional aesthetic terms, than Dostoyevsky, Woolf and Stendhal. It is understandable that ecocritics might assert a compensatory snobbishness against the materials of the American culture industry. Nonetheless, it has been a strategic disaster to dismiss an area of cultural production that is now flooded with environmental discourse, rhetoric and politics. In the name of the high ground, we have sacrificed a terrain in which our concerns are actually winning.

I believe, therefore, that our pedagogy must be conceived more broadly to include cultural studies in an otherwise literary landscape. As Jhan Hochman says, 'In the territory of Postmodernity, nature, probably due to its rapid decimation, emerges as a politico-cultural object, one which is no longer restricted to literature, "fine art", and formalist cinema and video, but also has starring roles in commercials, photos, and movies', as we will see (Hochman 2000, p. 187). For example, this year my environmental humanities seminar focused on global issues of water and water rights. We began the semester in a traditional manner, by working our way from Washington Irving through Walt Whitman, Sarah Teasdale and James Weldon Johnson to trace the representation of the Manhattan landscape in literature. These readings were then compared to the literature of the deserts of the American Southwest, especially the work of Leslie Marmon Silko. Students were prompted to compare the matter of water abundance

to the matter of water scarcity, noting the way issues of environmental justice changed when activists fought over the Delaware, Croton and Catskill watersheds, which supply billions of gallons of pristine water to New York City, versus the conflict over the limited supply of fresh water, now polluted by uranium mine tailings, on which the Pueblo nations of New Mexico depend. The tension between water-as-commodity and water-as-birthright was localised again by the conflict over 'fracking' – the extraction of natural gas through underground hydraulic fracturing – that now threatens the New York water supply. Students read an online *Vanity Fair* article on the destruction of local wells in Dimock, Pennsylvania through fracking, as well as an online *Vanity Fair* video of Dimock residents testifying to the effects of combustible tap water (Bateman 2010). The vulnerability of poor communities like Dimock and Laguna Pueblo to the fossil fuel economy was reinforced by Josh Neufeld's graphic novel *A.D.: After the Deluge*, an account of the Katrina crisis, and by YouTube videos of the slam poet Patricia Smith performing her book *Blood Dazzler*, a series of Katrina-inspired dramatic monologues. These themes were then globalised by the activist documentary *Flow*, which describes the effects of privatisation schemes on the water supplies of South Africa, Rajasthan (India) and Cochabamba (Bolivia), where a 'water war' erupted in 2001. These stark realities of global capitalism were then juxtaposed with *Spirited Away*, the director Hayao Miyazaki's animated translation of the Japanese destruction of watersheds into a quest to cleanse and befriend dragons, the traditional river-spirits of Taoist and Shinto tradition.

The structure of this syllabus is an example of what Joni Adamson has recently called 'nesting', in which literary materials from the traditional canon are radically recontextualised through connections with contemporary media (Adamson 2010, p. 25). This approach energises the study of canonical print texts with the concerns of contemporary media, even as these are historicised through association of materials that were, in their time, not canonical literature at all, but radical departures from the Greek, Latin and biblical texts considered the purview of the educated gentleman. 'Nesting' demystifies the status of the vernacular canon by revealing the *lack* of cultural authority these texts held in their original context, much as popular culture lacks authority at the moment. Nesting modifies the traditional period-and-genre structure of Americanist pedagogy in favour

of something much more like the method of Comparative Literature departments, which might juxtapose an Icelandic saga with a Chinese folk novel if that juxtaposition served to illuminate those works. The comparative method seems, in fact, far better suited to ecocriticism and green cultural studies than the nation and period approach of North American English departments, especially because so many environmental issues naturally transcend the boundaries of nation and period. Though they need to be distinguished, the comparative method, nesting and media convergence are natural allies because they privilege the aggregation of materials according to an ecosystemic model of discourse, a structure of feedback loops and Latourian quasi-objects, rather than the model of cultural accretion that structures both undergraduate and graduate studies at the moment.

Though one might be tempted to think that such a Promethean approach would be antithetical to the study of individual works, I have observed the opposite. I would like to focus now on one particular connection, between Leslie Marmon Silko's *Sacred Water* and Hayao Miyazaki's *Spirited Away*, in order to highlight the illumination of individual works through cross-cultural media convergence. In my seminar on water, I anchored the desert section with two pieces by Silko: first, 'Landscape, History, and the Pueblo Imagination', an essay that appears in the foundational anthology *The Ecocriticism Reader*. Though 'Landscape' can be a difficult text for students because it is both personal and philosophical, it is recognisably an essay, and is susceptible to normal interpretive procedures. *Sacred Water* is something else. Published in 1993 by Tucson's 'Flood Plain Press' – that is, by Silko's own hand – *Sacred Water* began its life as a private object circulated among friends: there are only 750 extant copies, each one handmade by the author using dot-matrix printing, reproduced photographs and a photocopier. By this time, Silko had already published *Storyteller*, *Ceremony* and *Almanac of the Dead*, the works that established her reputation, so the status of *Sacred Water* as handicraft is, presumably, voluntary. However, because of the book's meditation on the importance of water compromised by inter-tribal jealousy, American imperialism and the mining of uranium to build a nuclear arsenal, *Sacred Water* quickly became an open secret among scholars and completists. My students worked from a photocopy of a photocopy provided to me by a senior scholar who had bought the original

on eBay at some personal cost. But the complicated history of the book as artefact – even the presence of the archaic medium of dot-matrix printing – was eclipsed for my students by Silko's hand-drawn pictures that decorate the cover and inner pages of the book. The majority of these pictures represent the Serpent Spirit that inhabited the lost lake that gave Laguna Pueblo its name. Other pictures of snake petroglyphs adorn different pages, and Silko explains that such glyphs were part of a pictorial cartography used by the Pueblo to indicate sources of fresh water. To underline the benevolence of the serpent image in opposition to the dominant Christian narrative of the Fall, Silko playfully ends the book with a picture of the Serpent Spirit carrying the book's ISBN number in its belly. This combination of prose, photographs and drawings confused my students utterly: mythographically challenged, they failed to see the significance of an apparently primitive spirituality of water.

This changed when I screened Miyazaki's *Spirited Away*. Less well known in North America than *Princess Mononoke* or *My Neighbor Totoro*, *Spirited Away* is the story of a suburban Japanese girl whose family is trapped in the spirit world, imagined as an abandoned amusement park that hosts a bathhouse where spirits come to relax and renew themselves. The protagonist, Chihiro, is at loose ends when her parents are turned into pigs by consuming the food of the spirits, but she finds an ally in Haku, a henchman of Yubaba, the chief witch of the bathhouse. With Haku's help, Chihiro completes a number of tasks that allow her to fulfil her quest to restore her parents to human form. Chief among them is the cleansing of the Stink Spirit. Re-enacting a scene that Miyazaki himself experienced during a river-cleaning event near his home, Chihiro pulls all manner of junk from the spirit until he is completely cleansed, revealing his true form as a river dragon. (Dragons are spirits of the elements in many East Asian traditions.) In gratitude, the dragon gives her a magical pellet that allows her to free Haku from the witch's dominion. Chihiro's way with rivers originates, it turns out, from a childhood accident when she fell into Haku's river, which has since been buried to make way for suburban Tokyo. As a result of this displacement, Haku has forgotten his name and fallen in with Yubaba; but Chihiro remembers his name, remembers being rescued from drowning by his current and gives his name back to him, restoring his memory. He then aids her in overcoming the witch and restoring her parents.

Spirited Away is, among other things, the story of a girl who becomes a hero through alliances with river dragons. Once my students had digested this story, the significance of Silko's water serpents became clearer. Though Silko and Miyazaki do not refer directly to each other, they share the strategy of recovering the figure of the water dragon in an otherwise modern life-world. The inclusion of an ostensibly archaic spirituality in a contemporary context was difficult for my students to face, but Chihiro's identity as a modern child made the Pueblo worldview more accessible. This convergence of water dragon media then ramified backwards through the course materials until students began to see the Hudson and East Rivers as something other than natural resources, as beings with a life and history of their own, apart from their use-value to New York City. Convergence thus becomes a force to resist dominant narratives of anthropocentrism and environmental destruction.

Convergence can also, however, move across ideological boundaries in a manner that students should learn to perceive and critique, as in the movement of the polar bear as victim of climate change to symbol of climate activism to character in an advertising campaign. Since the recognition that Arctic warming has triggered a disastrous disruption in Arctic ice cover, the polar bear, whose ability to hunt and reproduce is threatened by lack of summer ice, has become a symbol of climate change as engine of mass extinction. This symbol has been incorporated into environmentalist mass media, as in the May 2007 *Vanity Fair* cover that shows – through the miracle of Photoshop – the famous polar bear cub, Knut, gazing in supplication at Leonardo DiCaprio, whose film *The 11th Hour* documents the threat of climate change. However artificial the image, there is at least an ideological match between the polar bear and the celebrity: both are enemies of climate change. However, in 2010, the polar bear meme was appropriated by Nissan for a commercial in support of its new electric vehicle, the LEAF. The commercial begins with a polar bear threatened by melting ice making its way south until it reaches a suburb outside a city. The commercial then cuts to a professorial-looking man leaving his house to begin a commute with his Nissan LEAF. Suddenly, the polar bear rears up behind the man as if to maul him, but instead, because of the LEAF, the man gets a bear hug (Figure 11.1).

The implication is that the green commuter can earn the gratitude of polar bears by purchasing the Nissan LEAF. When I asked

Figure 11.1 Man hugged by polar bear in Nissan LEAF commercial

my students if they were convinced by this subtext, they said yes, overwhelmingly, due to the sentimental appeal of this kind of teddy-bear environmentalism. When I pointed out that the LEAF could be powered by electricity from a coal-burning plant – and elude carbon-neutrality as much as a traditional vehicle – they were horrified. The power of the polar bear had been appropriated by the automobile industry to make an emotional argument that students had failed to notice as an argument, and this rhetorical drift seems to be typical of media convergence, as we saw with 'Bert Is Evil'. This drift should offer powerful inducement for us to construct assignments of ideological critique using convergent media, as ecocompositionists have long advocated in print-based media. The collaborative intelligence and culture of participation that Jenkins associates with media convergence – the sense that one ought to influence the media one encounters as part of a networked crowd – should be extended to *critical* collaboration that does not merely consume, but judges the vectors of media persuasion, and responds accordingly.

The ethical problem with the Nissan LEAF commercial lies in the corruption of trans-species empathy in the service of global

capitalism, but it would be wrong to assume that convergent media, as such, corrupt empathy. The most poignant convergence for my students was also an example of empathic viewership turned toward more productive ends. In this unit, I asked the class to read the Wikipedia entry on the 'Great Pacific Garbage Patch': an amorphous but enormous area in the northern Pacific Ocean filled with suspended plastic particles trapped by circular currents. They then read about the voyage of the *Plastiki*, a ship made out of plastic water bottles commissioned by David de Rothschild, a wealthy eco-adventurer, in an attempt to draw media attention to the problem of plastics. We also read critiques of celebrity environmentalism, including a blog entry called 'Is David de Rothschild a Douchebag?', which concluded that the moral status of celebrities might matter less than the consciousness they raise (Westervelt 2010). Though students had no sympathy for de Rothschild himself, their attitude toward the *Plastiki*'s mission changed when they viewed photographer Chris Jordan's 'Midway Project', which documents the effects of the garbage patch on the albatross chicks of Midway Island. Midway is a nesting ground for the albatross, but since the creation of the patch, it has also become a charnel ground. Adult albatrosses perceive the suspended plastic particles in the water as food and carry them back to their chicks, which ingest them and finally die of starvation with a belly full of trash (Figure 11.2).

Though Jordan claims simply to have pointed his camera at the ground, the effect of the photos is both eerily abstract – as if the image were composed with abstract expressionism in mind – and vividly concrete. The beauty of the picture, the pleasure one can take in a still life that should not be still – is part of the horror. Whereas students thought of the *Plastiki* as a stunt to score points with a global audience, the resemblance of the Jordan pictures to Modernist paintings produced a gut-level revulsion. When I juxtaposed both websites during class, students commented on the *faux-naïveté* of the *Plastiki* site – modelled after Thor Heyerdahl's *Kon-Tiki* adventure – while they approved of the minimalist presentation of the Midway Project, with each dead chick photograph stacked on top of the other, so the effect of scrolling down the page resembled the documentation of a genocide. This reaction is a testament to the limits of 'digital native' thinking: while the *Plastiki* page is tricked out with animation, YouTube video of the voyage, 3-D diagrams of

Figure 11.2 Dead albatross chick on Midway Island

the ship and Twitter-like commentaries from the crew, the Midway Project presents its evidence bluntly. Though one might expect the hypermediated project to reach students through its 'digirati'-style presentation, it is the more straightforward approach that appears to have succeeded. In the end, the content of the *Plastiki* site became acceptable only through its interaction with the Midway Project, where one could see what all the fuss about plastic might be about.

Though it might not have been my students' favourite example of green media, the *Plastiki* seems to be an apt symbol of my version of cultural studies pedagogy. The ship and my syllabus were aggregates of artificial but strangely persistent materials turned to the defence of nature *and* culture. Though it is impossible to say whether any of the convergent media I used will qualify, in a hundred years, as the best of what has been thought and said in our time, I believe that the sheer, if ephemeral, power of media convergence requires us to take it seriously as an instrument for collective ecological intelligence and participatory politics.

Note

1. Exceptions to this trend include: Cubit (2005); Dobrin and Morey (2009); Murray and Heuman (2009); Willoquet-Maricondi (2010).

Works cited

J. Adamson (2010) 'American Literature and Film from a Planetary Perspective: Teaching Space, Time, and Scale', *Transformations: The Journal of Inclusive Scholarship and Pedagogy* 21:1, 23–41.

Adventure Ecology, 'The Plastiki Project', http://www.theplastiki.com/, accessed 7 January 2011.

C. Bateman (2010) 'A Colossal Fracking Mess', *Vanity Fair*, http://www.vanityfair.com/business/features/2010/06/fracking-in-pennsylvania-201006, accessed 13 October 2010.

BBC News (2003) 'US Troops Kill Baghdad Lions', http://news.bbc.co.uk/2/hi/middle_east/2966107.stm, accessed 6 May 2011.

P. Bourdieu and J. Passeron (1990) *Reproduction in Education, Society, and Culture*, trans. R. Nice (London: Sage Publications).

S. Cubit (2005) *EcoMedia* (Amsterdam: Rodopi Press).

S.I. Dobrin and S. Morey (eds) (2009) *Ecosee: Image, Rhetoric, Nature* (Albany: SUNY Press).

J. Hochman (2000) 'Green Cultural Studies', in *The Green Studies Reader: From Romanticism to Ecocriticism*, ed. L. Coupe (New York: Routledge), 187–192.

D. Ingram (2004) *Green Screen: Environmentalism and Hollywood Cinema* (Exeter: University of Exeter Press).

H. Jenkins (2006) *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press).

C. Jordan (2009) 'Midway: Message from the Gyre', http://www.chrisjordan.com/gallery/midway/#CF000313%2018x24, accessed 5 January 2001.

H. Miyazaki (dir.) (2002) *Spirited Away* (USA: Walt Disney).

R.L. Murray and J.K. Heuman (2009) *Ecology and Popular Film: Cinema on the Edge* (Albany: SUNY Press).

Nissan USA, 'Nissan LEAF: Polar Bear', http://www.youtube.com/watch?v=BNeEVkhTutY, accessed 7 January 2011.

L.M. Silko (1993) *Sacred Water* (Tucson: Flood Plain).

———(1996) 'Landscape, History, and the Pueblo Imagination', in *The Ecocriticism Reader: Landmarks in Literary Ecology*, ed. C. Glotfelty and H. Fromm (Athens, GA: University of Georgia), 264–275.

B.K. Vaughan and N. Henrichon (2008) *Pride of Baghdad* (New York: Vertigo).

A. Westervelt (2010) 'Is David de Rothschild a Douchebag? Does It Matter for Plastiki?', *The Faster Times*, http://thefastertimes.com/earthmatters/2010/03/29/is-david-de-rothschild-a-douchebag-does-it-matter-for-plastiki/, accessed 11 December 2010.

P. Willoquet-Maricondi (2010) *Framing the World: Explorations in Ecocriticism and Film* (Charlottesville: University of Virginia Press).

12
Teaching Ecocriticism and Cinema

Adrian Ivakhiv

In her introduction to *The Ecocriticism Reader*, Cheryll Glotfelty (1996) suggested that the history of ecocriticism be considered in terms analogous to Elaine Showalter's three stages in the development of feminist criticism. First, in this scenario, comes the examination of 'images of nature' (or of women, in Showalter's account). Next comes the 'literary tradition' stage, which, for ecocritics, involves uncovering and revalorising the tradition of 'nature writing' and of fiction and poetry that illustrates 'ecological awareness'. Finally comes the 'theoretical' phase, which draws 'on a wide range of theories to raise fundamental questions' about the 'symbolic construction' of nature and the non-human world (pp. xxii–iv).

Ecocriticism has long pursued all three of these tasks, and has now spread well beyond its original home in literary studies. Film and visual media are among the growth industries for ecocriticism, and for 'green cultural studies' more broadly. It has been a little over a decade since the first book-length studies appeared that analysed cinematic representations of nature with an eye toward their ecological, in addition to their social, implications. While Mitman's (1999) and Bousé's (2000) studies of wildlife documentaries may not have set out explicitly to extend the boundaries of ecocriticism, the books that have followed in their wake have created a recognisable movement of 'ecocritical film studies', 'green film studies', 'ecomedia studies', 'ecocinecriticism' or something of the sort (MacDonald 2001; Burt 2002; Ingram 2004; Brereton 2005; Cubitt 2005; Carmichael 2006; Chris 2006; Ivakhiv 2008a; Murray and Heumann 2009). Most of these efforts fall into Glotfelty's and Showalter's first two stages: on

the one hand, the 'images and representations' school of analysis; and, on the other hand, examination of genres or specific films that exemplify greater ecological consciousness than the norm. What has remained largely undeveloped is the third, 'theoretical' phase, though this has been changing recently.[1] There is arguably a further fourth phase, one in which the theorisation of ecological issues in relation to a given medium turns back on itself so as to place the very medium into question. With writing, such self-reflexivity regarding the literary medium has not been common, since writing and publishing are seldom considered ecologically high-impact industries. With film, however, things are different, since it is difficult for an ecocritic not to note that the making of films carries ecological costs. Thinking about films ecocritically involves not only examining representations of nature, or of human–nature relations, *within* films; it must also involve examine the film medium itself, including the production, distribution and consumption of films and the by-products generated at each step of this life cycle. In turn, literary ecocritics could learn from this approach.

I have been teaching a course entitled 'Ecopolitics and the Cinema' at the University of Vermont since 2005. I have taught the course four times, in three different formats: as an open to the public, five-evening course held at a local public film screening venue; as a nine-week, one-credit course consisting mainly of film viewings, select readings and classroom discussion; and (twice) as a 'traditional' 14-week, three-hour per week class, with regular reading and writing assignments and a term paper. As the course has evolved, so has my approach to the material. The course began with a broad definition of 'ecopolitics', incorporating the ethics and politics of film-making as well as the analysis of how films depict intra-human and human–non-human relations. Over time, the course has become more philosophical, to the point where it could reasonably be retitled 'Ecophilosophy and the Cinema'. This, in effect, recapitulates the movement in ecocriticism from a concern with 'images' and 'traditions' to a concern with broader theoretical issues, including the theorisation of what film is – its status as a communicative object for its viewers, but also its status as a material object within ecologies from and within which it is made, multiplied and disseminated, leaving behind impacts that trail behind any immediate effects it has on its viewers. In addition, then, to being an introduction to the broad

historical spectrum of cinema for environmental studies students, the course has become a course in environmental film-philosophy, or, as I prefer to call it, a course tracing the multiple 'ecologies of the moving image'.

Ecologies of the moving image

The course presumes no background in film or visual theory, but it does presume a basic familiarity with environmental concepts and ideas. Students are told that they will be introduced to certain ways of thinking about moving images, that is, about 'ways of seeing' as these have developed over the last 120 or so years. The challenge will be to understand how these 'ways of seeing' the world have altered our experience of the world, the ecological implications of those changes and the ways in which these same media might be used to reconstruct relations between humans and their non-human environments in socioecologically ethical and productive ways. At its most general, the course asks students to think about how films work on audiences: how do films generate meanings and affects (feelings, sentiments, emotional responses, desires, motivations, sensibilities), especially those related to our understandings of the 'human' and the 'natural'? Consistent with such a broad question, the class screenings are not at all restricted to films considered 'green' or 'environmental' in content or in approach. Rather, we watch and analyse examples from a very broad spectrum, including 'nature films' and wildlife documentaries but also silent and avant-garde films, ethnographic films, science fiction and horror movies, animated films, public affairs documentaries, 'viral' YouTube videos and commercial advertisements, and art films from around the world.

Our interest, then, is not only in *what* films show us, but also in *how* they show us these things and how this affects our 'ways of seeing' ourselves and our relationship to the nonhuman world. The course contextualises film-making and viewing within the evolving history of sociopolitical relations and movements relevant to environmental thought. These developments include Romanticism and the American conservation movement, anthropological and colonial encounters with the non-West, the 1960s New Left and counterculture, feminism, Third World liberation movements, neoliberalism and globalisation. So, for instance, in our discussion of the depiction

of landscape in the American Western and in its later revisionist descendants (such as the road movies *Easy Rider* or *Dead Man*), we read about the Hudson River and Rocky Mountain schools of landscape painting, the portrayal of 'the West' (of the US) during the nation-building phase of US history, the politics of the 'magisterial gaze', the history of automobility and national identity, and the changing role of 'the Indian' in the American imagination. In our viewing of the New Deal environmental documentaries *The Plow that Broke the Plains* and *The River*, we read about social documentary photography, the history of ecological thought, the tradition of the 'jeremiad', debates over the role of government in media production; and we view excerpts from Soviet films that influenced the film-makers. The most recent iterations of the course, though, invoke a specific ecophilosophical framework derived from process philosophy.

A process-relational ecophilosophy of cinema

A process-relational perspective builds, in a general sense, on core elements within evolutionary, ecological and dynamical-systems sciences. More concretely, however, it is rooted in insights associated most closely with the process philosophies of Alfred North Whitehead, Charles Sanders Peirce and Gilles Deleuze. In a process-relational view of the world, relational processes – those activities by which things emerge, grow, interact and affect the world around them – are central, and objects, including films, are considered not so much for what they *are* as for what they *do*.

Films, as we discuss them in the course, are examined in terms of their impacts within a series of 'three ecologies': the material, the social and the perceptual. To grasp the distinction between these three ecologies, it is necessary to understand a key difference between process-relational thought and the various forms of idealism, materialism and dualism that have dominated modern Western metaphysics. The latter either take 'mind' and 'matter' to be two separate substances, or take one of these to be ultimately reducible to the other: mind to matter (materialism), or matter to mind (idealism). Process-relational thought, in contrast, regards the mental to be the 'internal' dimension corresponding to the 'external' that is material. Everything in the universe, to the extent that it is real and not merely a perspective taken by another thing, *experiences* other things. (This

view is known as 'panexperientialism', which is a close cousin to 'panpsychism'.) Every moment of experience, or, in A.N. Whitehead's terms, every 'actual occasion', relates a subjective or mental 'pole' to an objective or physical 'pole'; the two co-emerge such that they cannot be separated or unevenly distributed among entities (such as humans or non-human objects).

If such a 'dual-aspect monism' is taken to be a useful approximation of reality, then it should lead us to distinguish between *three* aspects of the world: one that sees things 'from the outside', as objects 'out there' in the world; a second that views them 'from the inside' of their subjective experience, or that at least assumes that there *is* an inside and that it is loosely analogous to what we experience ourselves; and a third that looks at the actual, interactive dynamic between things, which always involves a movement across the boundaries between the internal and the external, the experiencing and the experienced, the subjective and objective modes that are found within each occasion of experience. The material or objective world is the world of physical bodies, oxygen molecules, carbon cycles, the combustion of oil and the evidence of the past in geological strata; it is that which is typically studied by the physical sciences. The social or subjective world is the world of selves, desires and the capacity to act and respond to occurrences in one's environment; it is the 'life of the mind' that is articulated in literature and appealed to in everyday conversation. The perceptual or phenomenological world is the real milieu within which things affect and are affected by other things; it is (to oversimplify somewhat) the phenomenology of the life-world, as Husserl would have called it. It is, however, a phenomenology that extends to all things, since all things are experiencers as well as experienced.

Film's effects in the material and social worlds – as, for instance, the contamination of a river by film production along its banks, or the economic or sociopolitical realities that dictate what kinds of films are made, where they are exhibited, and so on – are carefully examined at selected points in the course. The primary focus of our discussions, however, is what happens within the intermediary 'perceptual ecologies', because this is where film's most distinctive contributions to the world can be found. And if cinema is what cinema does, then the essence of cinema could be rendered as follows: *cinema is a machine that takes viewers on journeys into film-worlds*.

Moving images *move* us: they project our imagination across the territory of the world they produce, drawing viewers into the movement of the storyline, the actions and reactions unfolding in and through and around the places and characters portrayed. Cinema produces or 'discloses' worlds, and viewers follow the lures it presents in ways that make up our own individually negotiated film-experiences. This is the case whether a film is 'fiction' or 'fact', whether it constructs a futuristic world that barely resembles our own or portrays historical events and persons that viewers know to have been real.

To clarify how films affect the 'perceptual ecology' of the world, the course introduces a further conceptual triad of cinematic dimensions. According to these, cinema is *anthropomorphic* in that it produces a cinematic version of or resemblance to the human, thereby generating an apparent social or 'subject-world'; it is *geomorphic* in its production of a spatially organised or territorialised, material 'object-world', an apparent geography distinguished by hereness, thereness and distances and relations between the 'pieces of world' displayed; and it is *biomorphic* in its production of an apparent world of animate, lifelike and interperceptive forms, which are shown to see and be seen, hear and be heard, at the same time as we, the viewers, see and hear them and, in effect, learn *how* to see and hear them. In terms of the process-relational account of experience suggested above, the geomorphic is the world of things seen from their outside; the anthropomorphic is the world of agency; and the biomorphic is the world of the 'interperceptive' action and reaction itself.[2]

In what follows, I discuss the geomorphic dimension, and then go on to describe a few of the methods by which students in the class are encouraged to think about films as active and continuing processes.

Entering the Cinema-Zone: geomorphism and the human–land relation

Any theory of film is likely to be better demonstrated in certain films than in others. To grasp how films constitute journeys into film-worlds, I take as a paradigm case Russian filmmaker Andrei Tarkovsky's 1979 film *Stalker*. Adapted from a science fiction story by the Strugatskii brothers, the film depicts the journey by three men into a mysterious 'Zone', at the centre of which is a room in which it is said that one's deepest wish comes true. The Zone may be the

product of an extraterrestrial visit, though this question is left uncertain in the film. Whether in fact the visitors' wishes are granted or not is also left unresolved. In fact, much in the film is unresolved: we are not sure exactly what these men are searching for, what compels them to go to the Zone in the first place, nor do we know how their lives will change (if at all) after their re-emergence back into their everyday lives. The film is slow, almost three hours in length, and consists largely of long takes and slow pans across a landscape where the remains of human activities are being reclaimed, as it were, by nature. Many students initially find it 'boring', but over time almost all come to recognise its value in relation to the model of cinema explored in the class. The slowness, for one thing, allows for a keen attentiveness to what happens on the screen, an attentiveness matching the filmmakers' care in presenting the landscape as a place where temporal processes occur in their own time.

Two further contexts accentuate the film's significance for the course. The first of these concerns the material conditions and effects of its production. Made in the Soviet Union of the late 1970s by a filmmaker considered somewhat of a dissident, the film was re-shot after a first version was destroyed, and took almost two years to complete. Much of the shooting was done in a former industrial zone outside Tallinn, Estonia, and toxic chemicals in the environment are thought to have contributed to the early deaths from cancer of several actors and crew members, including Tarkovsky himself. The second context, the Chernobyl nuclear accident, is one that did not arise until seven years after the film was made. Many Soviet citizens interpreted Chernobyl in the light of the film: the contaminated area around the reactor was depopulated and, as in the film, became known as 'the Zone', while informal guides who led unofficial (and illegal) tours into the Zone came to be known as 'stalkers' (see Ivakhiv 2011).

The central metaphor of the film is that of a Zone into which we journey, carrying our hopes and fears with us and uncertain of what will result. If, as the process-relational model suggests, all films take us on journeys into film-worlds, then the best may be those that take us to places that *change* us in some way, including the relationship between ourselves and the places depicted. We explore the idea that there are distinct traditions in and through which such 'geomorphologies' have been produced and reproduced, critiqued and

modified. The classic American Western – our example is John Ford's *The Searchers* – presents the inchoate landscape of the US Southwest (as in so many other of Ford's films, it is the landscape of Monument Valley in northern Arizona) being settled by white farmers. Through the trials and tribulations of the settlers fighting off their Indian rivals, the land becomes perceived as rightfully belonging to those settlers. The model here, then, is one of 'land becoming ours'. An alternative model, 'land *as* us', is well represented in Ukrainian director Aleksandr Dovzhenko's silent 1929 film *Earth*. Here, the arrival of the first mechanised tractor in a Ukrainian village is framed by the death of a village elder, the birth of his great-grandson and the cycles and imagery of nature: wheat fields and sunflowers stirring in the wind, apples and melons in the spring rain. In effect, the progressive revolutionary narrative the Soviet authorities had expected from the film is upstaged by a lyrical and pantheistic succession of images connecting the human world with the non-human, historical change with seasonal repetition, political forces with familial relationships, such that what the film is ultimately about is the earthbound continuity of life. A third model, 'land as for us (and to be managed wisely)', can be seen in Pare Lorentz's New Deal documentaries *The River* and, to some extent, *The Plow that Broke the Plains*. A fourth model could be called 'land as encounter and experience'; one form this takes is that of the road movie, such as *Easy Rider*. A final model, more common in the post-war period, could be called 'land (or nature) as Other': in Michelangelo Antonioni's existentialist landscape films (*L'Avventura*, *L'Eclisse*, *The Passenger*) or the 'ironic sublime' cinema of Werner Herzog (*Aguirre, the Wrath of God, Fata Morgana, Lessons of Darkness*), land or nature is often portrayed as something so foreign that we are not normally capable of comprehending it, let alone living in harmony with it.

One way in which the above models differ is in their preference for particular visual and spatial orientations. For instance, 'land as for us' or 'becoming ours' tends to favour perspectival, overarching views from above eye level, akin to the 'magisterial gaze' of nineteenth-century landscape art. 'Land as encounter and experience' favours lateral movement across landscapes and moving-camera action sequences. 'Land as Other' favours shots in which what is shown exceeds the frame, disrupts it, or obstructs the movement of the narrative, and so on. Through exercises in which students are asked to

identify and discuss the feeling they get from watching a scene (spectacle/ affect), the sense of movement through and across sequences of scenes (narrativity) and the thoughts and ideas that arise for them in watching (exo-referentiality), we develop our own classifications for the different ways in which film can present a world to its viewers.

Rhythms of viewing/thinking, processes of resonance, after lives of films

With its focus on worldly activities as relational processes, the course pays close attention to the processes by which viewers make sense of films and to those by which film images and meanings filter into the broader culture over time. In this final section, I will discuss two ways in which this attention to process helps students identify and articulate some ways in which films produce meanings and affects in the wider world.

The Cove is a documentary about an annual slaughter of dolphins that takes place in the coastal Japanese town of Taiji. It depicts a group of environmentalists' efforts to capture footage of the kill, in the hope that if the world saw the extent and means of the carnage, it would ensure the practice would end. Since it is a fairly popular environmental documentary, many students have already seen *The Cove* before the course begins. They are assigned to re-view it in time for the class in which we will watch another documentary, Hubert Sauper's 2004 film *Darwin's Nightmare*. As part of their assignment for *The Cove*, students are asked to identify three or four distinct rhetorical strategies, or what the course (following Gilles Deleuze) identifies as specific combinations of 'signaletic material'; that is, combinations of sounds and images generative of a certain kind of impact. Specifically, students are to seek distinctive combinations of the three elements of the film-experience referred to earlier: spectacle, narrativity and exo-referentiality. Most students, for instance, note the ways in which *The Cove* repeatedly combines a certain ominous music with fast camera movements and 'stealth actions' on the part of the documentary team as it is trying to set up its cameras to film the criminal act of the dolphin hunters. Another rhetorical mode is that by which the lead character, Rick O'Barry, looks back on his life and identifies

moments in his experience as a dolphin trainer that led him to become a passionate activist on behalf of dolphins.

With these distinct rhetorical styles in mind, we then watch *Darwin's Nightmare*, a film about the effects of globalisation on communities living on the shore of Africa's Lake Victoria. In place of *The Cove*'s action heroes and melodramatic narrative there is only Sauper's camera, patiently teasing its way into the lives of its Tanzanian fishermen, homeless villagers and prostitutes, Russian and Ukrainian airline pilots, and others eking out a living (or not) on the sidelines of the transnational-export fishing industry centred on the exotic and carnivorous Nile perch. Both films chronicle a kind of ecological trip to hell, but they are worlds apart in their styles. At the same time, both films share the privilege accorded to a Western camera operator's intervention into exotic worlds that are either incomprehensibly bleak, in the case of the 'heart of darkness' of *Darwin's Nightmare*, or all too easily subsumed within an orientalising Western gaze (in *The Cove*). One of the lessons that inevitably comes from viewing such films is that they never, alone, provide enough information on the basis of which we can decide their validity as interpretations of what they depict. More research – non- or extra-cinematic research – is always required.

After viewing these two documentaries, the students are asked to do some external reading and research. They are provided with perspectives from Japan and Africa, including those critical of the films, and with materials outlining the histories of dolphin slaughter and of the fishing of Nile perch in Lake Victoria – global histories that are complex and somewhat ambiguous in their moral lessons. They are asked to identify what each film's 'zone' is, how that zone is journeyed into, and what other options were open to the filmmakers but not utilised in presenting their documentary 'cases'. Finally, students are asked how well these two highly acclaimed films help us understand the places and problems they depict and how they might best be used to engender fruitful discussion around these topics. Films can be a powerful means of generating *affect* – stimulating desire to go somewhere and experience something, to emulate a character or explore for oneself a topic or possibility depicted in a film – but they are rarely as good at educating and informing audiences. A process-relational view suggests that the best films, in fact, stay 'alive' with

viewers long after they are viewed. With this in mind, students are encouraged, in their papers and assignments, to explore reactions of different audiences as these are documented on online fan forums and review sites.

One of the films we examine together in this respect is Werner Herzog's 2005 documentary *Grizzly Man*. The film is a kind of autopsy of the grisly death of self-proclaimed bear lover and 'defender' Timothy Treadwell (and his girlfriend Annie Huguenard) at the hands of a grizzly bear in Alaska's Katmai National Park. The film presents contrasting views about Treadwell, some of which question his character or his motivation while others celebrate his commitment to wild animals. It also sets up a dialogue between the director himself, Werner Herzog, and (the dead) Treadwell over what the appropriate relationship is between humans and wild animals. As students struggle with their own responses to the film, they examine the polarised responses the film has had among bear conservationists, wildlife guides and Alaskans. The question for students becomes: what is it in the film that sets up such a range of responses? How does the film itself shape the ways in which it has been taken up by audiences? Here we encounter the tail end of the life cycle of a film, which itself has 'processed' the lives of those it depicts, and which is now being 'processed' in turn by those who have seen it. Film is, in this sense, a journey into a film-world that is already a transformation of the world that preceded it. Understanding the nature of that transformation and the way in which it in turn transforms *us* is the task of an ecocriticism that is sensitive to the full life cycle of moving images.

Notes

1. A panel at the 2010 Society for Cinema and Media Studies meeting addressed precisely these issues. My book *Ecologies of the Moving Image: Cinema, Affect, Nature* (Ivakhiv, forthcoming) is also directly concerned with ecocriticism's relationship to film theory in general.
2. I use the term 'anthropomorphic' only because this is the typical form that agency takes in film, and that only because films are made by people, not by dogs, birds or dolphins. Each of these has its own subjectivation: canomorphism, avimorphism, delphimorphism, and so on. And each is open-ended, in the sense that there is no conclusive predicting what form, what morphology a particular entity will take once its agency has been fully exercised. Anthropomorphism is thus a kind of empty space in which

subjectivity does its work, making 'the human', or what we perceive to be human, in the process.

Works cited

D. Bousé (2000) *Wildlife Films* (Philadelphia: University of Pennsylvania Press).
M. Branch and S. Slovic (eds) (2003) *The ISLE Reader: Ecocriticism, 1993–2003* (Athens, GA: University of Georgia Press).
P. Brereton (2005) *Hollywood Utopia: Ecology in Contemporary American Cinema* (Bristol, UK: Intellect Books).
J. Burt (2002) *Animals in Film* (London: Reaktion Books).
D. Carmichael (ed.) (2006) *The Landscape of Hollywood Westerns* (Salt Lake City: University of Utah Press).
C. Chris (2006) *Watching Wildlife* (Minneapolis, MN: University of Minnesota Press).
J. Corbett (2006) *Communicating Nature* (Washington, DC: Island Press).
L. Coupe (ed.) (2000) *The Green Studies Reader: From Romanticism to Ecocriticism* (London: Routledge).
R. Cox (2006) *Environmental Communication and the Public Sphere* (Thousand Oaks, CA: Sage Publications).
S. Cubitt (2005) *EcoMedia* (Amsterdam and New York: Rodopi Press).
C. Glotfelty (1996) 'Introduction', in *The Ecocriticism Reader*, ed. C. Glotfelty and H. Fromm (Athens, GA: University of Georgia Press).
D. Ingram (2004) *Green Screen: Environmentalism and Hollywood Cinema* (Exeter, UK: University of Exeter Press).
A. Ivakhiv (2008a) 'Green Film Criticism and Its Futures', *Interdisciplinary Studies in Literature and Environment* 15:2, 1–28.
———(2008b) 'Stirring the Geopolitical Unconscious: Towards a Jamesonian Ecocriticism?' *New Formations* 64, 98–109.
———(2011) 'The Anthrobiogemomorphic Machine: Stalking the Zone of Cinema', *Film-Philosophy* 15:1, 150–155 (forthcoming).
———(forthcoming) *Ecologies of the Moving Image: Cinema, Affect, Nature* (Wilfrid Laurier University Press).
S. MacDonald (2001) *The Garden in the Machine: A Field Guide to Independent Films about Place* (Berkeley: University of California Press).
G. Mitman (1999) *Reel Nature: America's Romance with Wildlife on Film* (Cambridge, MA: Harvard University Press).
R. Murray and J. Heumann (2009) *Ecology and Popular Film: Cinema on the Edge* (Albany: SUNY Press).

13

Practising Deconstruction in the Age of Ecological Emergency

Timothy Morton

What, I hear you ask? How can you put the word 'practice' next to the most cerebral, recherché word in philosophy and cultural theory? And how, for goodness' sake, can I expect you to take it seriously in a volume about teaching ecological criticism, for heaven's sake? By the time you finish reading this essay, however, you may well agree with its author that you can indeed make deconstruction a matter of experience, hands-on, even 'raw' and 'naked' – now the deconstructors are lining up to take potshots! Not only that: you may well also agree with me that this kind of deconstruction – deconstruction with a pulsing, living heart – is just the ticket for ecological humanism.

We don't need deconstruction, I hear you say. In fact, many of you think it should be banned outright as part of the problem that got us into the ecological mess in the first place. Deconstruction is on the wane, and good riddance to bad rubbish! Polluting our brains when we should have been getting on with saving real life forms from extinction. And I would agree with you. Nothing is more important than working together with humans and non-humans alike to rescue this planet from the Sixth Mass Extinction Event and the global warming and destructive modernity that brought it on. I would even agree with you, in a somewhat modulated way, that deconstruction has had its day and that it has its problems, problems that I myself, and a number of other philosophers, are now trying to move beyond. 'Beyond' is the operative word here. I believe we can *progress* from deconstruction and that we should by no means *regress* from it. I believe that the deconstruction tunnel is a good tunnel that we must go through, rather than running in the other direction, looking

for a Nature that isn't there. What do we find on the other side of the tunnel? Intimacy with real others, including polar bears, plutonium and salt. An intimacy that compels us to act, willy-nilly, simply because we're aware of it. In other words, an aesthetic experience that magnetises us profoundly.

But how do you get there? How do you get through the tunnel? How do you realise the importance of the ecological task that now faces humans? Maybe I'm not talking to *you* after all. That would be preaching to the choir. Maybe this essay is addressed to your students, the ones who might be less than convinced of the compelling reasons to act for the sake of all living beings, right now. I've found that environmental humanities classes often fall afoul of two ironically related syndromes. The first comes in various shades of denial and opposition. The second syndrome has to do with guilt: a potentially endless game of greener-than-thou. How are these two seemingly opposite syndromes related? They both delay us from taking action and forming alliances and affiliations with others, doing art and philosophy and direct actions, helping out in communities and thinking. Why? Because they are both symptoms of a far more widespread syndrome, which for brevity's sake I shall call postmodern cynicism. We very urgently need to build ways of reflecting that don't trap us in this cynicism.

You will be surprised, perhaps, to learn that for me, deconstruction is the cure for postmodern cynicism. Yet far from thinking that they go hand in hand, I think that deconstruction is the ultimate vaccine against cynicism. The reason is simple: deconstruction forces us to question all our beliefs, and cynicism is a belief. The result of deconstruction is a painful awareness of our intimacy with others. These others include non-humans. Deconstruction is effective against cynicism where other techniques fail. This is because rather than attacking cynicism head on – a strategy that always produces resistance – deconstruction undermines it from the inside, piece by piece. You can't attack cynicism head on, because that merely reflects its belief in its aloof superiority to everything. No – you have to join it, then take it apart: judo, rather than boxing.

Cynicism thinks it has seen through everything, yet as Jacques Lacan once said, '*Les non-dupes errent*': if you think you've seen through everything, you are making the biggest mistake of all. Why? Because there is no meta-language: there is no outside of the

Universe. You can't jump out of your mind and see yourself. Wherever you go, there you are, in the words of that great Lacanian philosopher, Buckaroo Banzai. Yet the ultimate sign of intelligence in the modern academy is to one-up the other by showing how meta you can be: anything you can do, I can do meta. Somehow you have to trap the meta people in the butterfly net of sincerity. You have to convince them of the truth they so readily spout when they quote Derrida and Žižek – a truth they don't really believe, because they don't really live it: the truth that there is no meta-language. Somehow we have to create a sincerity fish to eat the irony fish on the backs of their cars.

How do you do it? If you try to bludgeon them into giving up their irony – 'Look at the trees! They're real for goodness' sake! Get out of your introverted skull, get out of the library, go out into Nature!' – they won't listen. Quite right too. You are really just bullying them with concepts: you are playing their game, actually. Strip the content from what you're saying and pay attention to the form, the how. You need to use non-violence. You have to get them to do what they think they do best – reflect. Introspect. For all their coolness, hip intellectual people are actually very object-focused, very outward directed, just like everyone else in our culture: they are very bad at true reflection. Some of them now think that the inner life is just a myth. These are the people you are trying to convince to give a monkey's about the Earth. The first thing you have to do is put them in touch with it, but not in the way you think – not by rubbing their noses in the soil. You have to rub their noses in their minds.

Let's come back to the environmental humanities classroom, and the problem at hand: deniers and guilt-trippers. Both are two sides of the same coin, producing hot air while species go extinct. You have to teach them to care but you also have to teach them to have a willingness to let go of rigidity. Deconstruction is the name for the intellectual exercise that allows you to do both. You see that Nature is a fabrication, but that actually existing life forms are intimately connected with you – they are you, in some sense. Without them you would cease to exist. Just like words in a sentence: they can't exist on their own, only in strings of phrases, clusters of words that have meaning entangled in them.

One of the most important lessons of deconstruction is that any sign system depends upon some non-signifying medium, such as an inscribable surface. Any sign system is constituted by this medium,

yet can't talk about it directly. And some sign systems actively discourage us from detecting the medium. This medium is *physical* – perhaps not material, as in made of quarks, but physical nonetheless. What a strange outcome for those who think that deconstruction is a form of anti-realism or idealism! The systems of physical objects upon which signs depend is what Derrida calls arche-writing. Normally we think of writing as made up of marks. But what counts as a mark rather than an ink blot or fly dirt? There must already be in place a system for excluding the physical traces out of which meanings emerge, excluding them from the system of meaning. Now go down a level. Think of painting. What's the difference between a meaningful brushstroke in a painting and a meaningless smudge? Is there one? At some point we encounter physical objects for which any meaning system can't account. This is why Derrida was interested in writing, and the exclusion of writing from habitual Western thinking about language. Writing is ineluctably physical. This is what the infamous '*il n'y a pas d'hors-texte*' really means: 'there is no outside-text'. It doesn't mean that everything is made of language, like some Matrix-like hallucination. *Structuralism* is what tells us *that*. Derrida, by contrast, is telling us that a text can never be a self-enclosed world. Texts simply can't talk about what is 'outside' them. Yet they necessarily involve what is 'outside' them – even the Matrix depends upon human bodies, software code and gigantic battery-like structures.

Deconstruction, in other words, is relentlessly *ecological*. It keeps on pointing to the garbage dumps of physicality outside the pristine towns of meaning that sign systems try to set up. The towns of meaning depend for their survival on the garbage dumps. Sometimes something leaks from the dump back into the town, because boundaries are never rigid and thin. Inside the thinking process, inside the meaning process, are the traces of exteriority that these processes struggle to exclude. That's the point: to find evidence of garbage, dolphins, plutonium and styrofoam, quite literally, on the very insides of Western thinking. In the very act of excluding waste, you are intimate with it. 'There is no outside-text' means that there is no 'away'. Deconstruction means realising, not that reality is colonised by text, but that there are weird pieces of physicality within texts, stuck in them like fossils in rock, and that if we examine them, we realise that there is no 'away'. The illusion that there is an 'away' is created by distortions of physical objects, such as marks made by pens and

words said by politicians. And the U-bend in your toilet, that seems to remove the waste to another ontological dimension. Ecological awareness and deconstruction amount to the same thing: there is no away any more. It's *the end of the world*, because words require distance and backgrounds, and those imply 'away'. Ecological thinking and deconstruction are attempts to carry on thinking after the end of the world. When the world ends, we are left with a crowded space teeming with unique life forms and non-life. Deconstruction doesn't dissolve those beings. It reveals them. As it says on the wing mirrors of cars in the US, objects in the mirror are closer than they appear.

Deconstruction is the name of the intellectual exercise that shows students the intimacy with strangers that defines their (ecological) existence, but to bring it home to people, you really have to teach them to meditate. When you do some kind of mindfulness meditation (be it Christian, Buddhist, atheist, Hindu, Sufi, whatever), you are training yourself to hold your mind quite lightly, caring yet open at the same time. You are doing deconstruction, but directly: allowing concepts to unwind of their own accord by paying them no mind, coming into a 'present' that is shifty and ambiguous and full of information, not some vacuous gap but rather an experience of intimacy, starting with yourself (your breath, your mind, your body, your immediate surroundings, all heightened by the mindfulness). You realise the basic truth of 'no metalanguage'. However much you try, you can't somersault outside your experience. Yet your experience is full of irony. And further yet, your irony is full of slightly sad, ambiguous tenderness. The sincerity fish just ate the irony fish!

By teaching meditation you get two for the price of one. Not only do you make deconstruction experiential – who would have thought it? You also melt the hard edges of experience a little bit; you introduce some air and openness into ecological thinking. You avoid greener-than-thou and you sidestep having to produce yet another reason why to care. You just teach how to care, directly. What to care about simply begins to arise spontaneously. If you haven't ever meditated, you have to trust me on this part of the argument, I'm afraid. Human beings are basically good, at least good enough to care.

Reflection is a vital part of reality and it's politically necessary to get as many people as possible to reflect on their actions in an ecological sense. Reflection is indeed a form of ecological action. It's not an avoidance of it – it's a direct form of what the Dalai Lama

calls inner disarmament. It's terribly important to slow down, maybe even stop, reverse or fundamentally alter the course of modernity. We can't do that unless we have some kind of experiential model for what that's like. Otherwise we just reproduce modernity all over again. Take the Marxists: they see through green ideas with consummate ease, because they are also victims of postmodern cynicism. Okay, you drive a Prius, but will it save the planet? I think not, says the Marxist. And look, it was made by a huge corporation. And you were conned by some advert to drive it. (Unlike me, the cynic. I drive a Mustang, as an ironic statement, because I'm not taken in by anything.) No one seems to want to take any baby steps at all. It's all or nothing – ironically, the ultimate baby picture of reality. Does your green idea reverse entropy? No? Might as well not build it then. We might as well jack it in and put wheels on leafblowers, since we're all going to hell in a handbasket. Humanist intelligence is defined by cynicism, by the ability to prove that you are so much more disillusioned than the other guy.

Only some kind of radical shock will jolt people out of this mode. I suggest that the shock be applied with gentleness, which is far more disturbing than a sledgehammer. You can get most people 90% of the way if you ruthlessly assault Nature as a metaphysical construct, while yet and at the same time building open-minded awareness of reality through meditation. Deconstruction is definitely not the belief that nothing really means anything: this kind of belief is a form of postmodern cynicism, which is convinced of its correctness. Deconstruction means being ready to be wrong. There is a humility in that and a high tolerance for ambiguity. These are good traits for humans to manifest to other life forms right now.

Meditation shares deconstruction's openness towards what Jacques Derrida calls '*l'arrivant*' and what I've called the *strange stranger* (Derrida 2000; Morton 2010). This is an entity – any entity – whose arrival we can't predict, whose being is fundamentally uncanny and unfathomable. It's familiar, yet strange, in the strict Freudian sense of uncanniness (Freud 2003). There is strange strangeness in every life form on Earth, quite literally: we share their DNA, their RNA, their cellular structure, their evolutionary history. Yet we aren't them. We cognise – they cognise; yet they are slimy moulds that can find their way around a maze, and we are intelligent primates who can find our way around a refrigerator. We have sex – they clone, if they

are amoebae. We have a sense of irony – perhaps they do too, especially if they're cats. Yet they aren't us. We're not us either! There is no cat-flavoured DNA, no human-flavoured DNA. For that matter there is no DNA-flavoured DNA, as it's a hybrid mélange of insertions, junk and all kinds of other pieces. Life is non-identical to itself. Ecology is the encounter with this non-identity, and ecological ethics is at the very least allowing the non-identical to exist. So is meditation. You have a strange thought; you let it be. Meditation in groups is an educational experience of being with others. That guy next to you might be plotting to take over the universe. But there's nothing you or he can do about it – you're meditating.

Meditation teaches you to be ready to be wrong. A simple exercise is to ask the class to take off their shoes. Most of the time we walk around in shoes – one of the slightly disturbing things you have to do when you enter a Buddhist shrine is to take them off. This has the advantage of letting students feel the ground, and it's a little bit exposing, but not too much. Another simple exercise is to teach walking meditation. Most people assuming that the point of walking is to get from A to B. Japanese style *kinhin* (very very slow walking meditation) is instantly instructive in this regard, as it reduces you almost to stasis, yet you are moving forward slightly with each miniscule step. Most of what one experiences on a regular basis is a mind projection based on habitual speeds and phases of thinking.

No particular insight is gained in either of these exercises. That's the whole reason to do them. They have no objective, no goal, no obvious utility. They are simply slightly unusual aesthetic experiences. But that's what we're teaching, isn't it? We're trying to teach students how to care for the environment. This involves noticing things they may not have noticed before. It involves aesthetics. But if you don't change people's attitudes, you can show them a million pictures of e-waste piling up in China and it won't touch their cynical distance. You have at some stage got to work directly with the students' attitude.

This is where you need some kind of confidence in the ideas you claim to believe. Do you really believe in Nature? Then you must have confidence that if you ruthlessly strip everything away that's just a construct, something real will remain. This is a truly contemplative approach to the problem of how to teach ecology, which is why ecological criticism has nothing to fear from deconstruction

and everything to gain. To repeat: you are not trying to perform cleverness. That kind of phoney deconstruction would be an absurd waste of time. Instead, you are trying to allow your students to fall in love with reality. To do this you have to bring their intellects along with you rather than leaving them for cynicism to toy with. Deconstruction is more like scepticism than cynicism, and in this it shares something with Buddhism, which had some communication with the sceptical philosophy of Pyrrho in the third century BC. Moreover, neither Buddhism nor deconstruction is a form of nihilism. The much-abused concept of emptiness (Sanskrit, *shunyata*) doesn't mean that nothing is real. It means that reality is open, unspeakable, beyond concept (Morton 2007). Deconstruction is a way to strip your mind of prejudices, like meditation.

Nihilism means believing in something – if only your own cleverness in having sussed it out. The ultimate modern ideological and spiritual disease is a form of cynicism with a nihilistic edge. It's very bad for Planet Earth, and it's time to get rid of it. The trouble is, you need a way of proceeding that is as fast and as smart as the cynicism itself. No amount of bludgeoning will work – you will be laughed at for being anti-intellectual. You need to dazzle the cynics with a smarter, more alluring game. Deconstruction with a contemplative heart is just the ticket.

Experiential contemplative practices are marvellous ways to begin to teach close reading of literary texts or other kinds of art. They force you to slow down. Derrida's one big piece of advice: 'decelerate'. Derrida advocated 'slow reading', a careful, painstaking attention to things that saw their faults and their strengths, their crinkly, worn edges and their smooth, well-worn surfaces. How to see things in their uniqueness and determinacy. An environmentally sensitive way of reading.

In the end, it's good to teach students some form of mindfulness meditation, because it's how you learn to handle your mind, so that eventually you can look outside yourself and see beyond your self-imposed view. Mindfulness is common to many religious and non-religious traditions – it's what you do when you learn to play the piano or drive; it's just that Indian, Japanese and Tibetan (and so on) meditation manuals have formalised it. As the Shamatha Project, run by neuroscientists at University of California Davis, is now showing,

mindfulness (Tibetan *shamatha*: *shiné* – means calming the mind) is real and very beneficial, with measurable, repeatable, testable results (see for instance Maclean et al. 2010). Mindfulness consists in placing light attention on some 'object' such as the breath (it could really be anything, like dough or a basketball or traffic on a motorway). The body is held in an alert but soft posture (traditionally this is the lotus position – or one at least sits with a straight back). Thoughts are not blocked, nor are perceptions. You let things in from your inner space and from outside. But when they occur you just let them occur and refocus on your meditation object. That's it.

What happens when you do this is well documented in the manuals of Mahamudra meditation from the Kagyü lineage of Tibetan Buddhism, a particularly hands-on school of Buddhist practice. There are nine stages of *shamatha*, which I won't go into here. The process is compared to letting a glass full of dirty water settle. At some point your mind becomes very clear. You also experience a lot of well-being and basic friendliness towards yourself and others (Sanskrit: *maitri*). This is good news: it means that when left to its own devices, your mind and your nervous system are basically pretty well meaning. A strong feeling of being attuned to your environment takes place. At the very least, in ecological terms, you learn to pick up after yourself (both literally and metaphorically). Beyond this, however, you develop some kind of courage to be welcoming to strangeness.

Welcoming strangeness is the essence of 'close reading', the careful analysis of cultural artefacts. Although the class resonance might be a little hard for some to take, the practice is akin to the Slow Food movement, an attempt to intervene in industrialised food production by carving out practices of handmade and carefully savoured food. In almost the same way, Derrida encouraged slow reading, even using this very term several times (Derrida 1981, p. 33). I.A. Richards had noted long ago that reading poetry had physical effects, though perhaps his view tends more towards passivity than towards the kind of charged intimacy that I have noticed in a contemplative classroom (Richards 2001, pp. 39–52, 214–223).

Teaching close reading in the expanded contemplative environment afforded by practices such as meditation produces a very interesting effect. First of all, student responses are no doubt enhanced. There are obvious physiological properties of language – you have to use your body to pronounce words, for instance, so rhythm and

rhyme are directives that shape your vocal cords and the bones in your face. There are less obvious psychosomatic and psychic effects, effects that are also physical: imagery can be 'touching' (why do we use that term?) or provocative, a sequence of ideas and images can fuse your conceptual mind, putting you 'back' into your body or into the open-ended uncertainty of nowness. Keats' poems are good examples: Keats creates poetic black holes, verbal objects so dense that no meaning escapes from them. Ecological L=A=N=G=U=A=G=E poetry does this – take a look at Brenda Hillman or Brenda Iijima. These are poems that try to become non-poems, turning back into physical objects.

When you read a poem you are allowing your body (let alone your conceptual mind) to become intimate with a strange physicality. The poem operates you, like a weird piece of gym equipment. What emerges from the deconstructive process are unique entities. Late Derrida is full of them: justice, forgiveness, the strange stranger. Far from dissolving everything into a void of insignificance, deconstruction silences our tendency to put things in a conceptual box. So deconstruction is highly congruent with a contemplative approach to teaching that emphasises open-ended intimacy with the object of study (it doesn't have to be a literary text).

The essence of deconstruction is realising you don't have to believe everything you think. At the same time you realise that you are stuck in your reality. There is some kind of ironic gap between the openness and the stuckness. As one Buddhist poet put it, 'The vicissitudes of this life are like drowning in a glass pond' (Trungpa 1984, p. 11). There is a weird vertiginous, crazy sad humour to this, which a Buddhist recognises in a second as home. You don't have to throw out the ironic baby with the cynical bathwater. You can be friendly, yet open. You can be a tree-hugger with a sense of irony. You can let yourself be seduced by other life forms and non-living objects, such as two raindrops racing one another down a windowpane. There is more room in your mind for ambiguity and compassion. You have taken your first step towards ecology without Nature.

Works cited

J. Derrida (1981) *Dissemination*, trans. Barbara Johnson (Chicago: University of Chicago Press).

———(1987) *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore and London: The Johns Hopkins University Press).
———(2000) 'Hostipitality', *Angelaki* 5:3, 3–18.
S. Freud ([1919] 2003) 'The Uncanny', in *The Uncanny*, ed. and trans. D. McLintock (London: Penguin).
T. Morton (2007) 'Hegel on Buddhism', *Romantic Circles Praxis*, http://www.rc.umd.edu/praxis/buddhism/morton/morton.html, accessed 6 May 2011.
———(2010) *The Ecological Thought* (Cambridge, MA: Harvard University Press).
I.A. Richards (2001) *Principles of Literary Criticism* (London: Routledge).
K. A. MacLean, E. Ferrer, S. R. Aichele, D. A. Bridwell, A. P. Zanesco, T. L. Jacobs, B. G. King, E. L. Rosenberg, B. K. Sahdra, P. R. Shaver, B. A. Wallace, G. R. Mangun and C. Saron (2010) 'Intensive Meditation Training Improves Perceptual Discrimination and Sustained Attention', *Psychological Science* 21:6, 829–839.
C. Trungpa (1984) *The Elocution Home Study Course* (Boulder: Vajradhatu Publications).

Further Reading

Ecocriticism

The primary source for ecocritical material is the ASLE website: http://www.asle.org/ The site includes useful introductory definitions of ecocriticism and a bibliographic database.

S. Alaimo and S. Hekman (eds) (2008) *Material Feminisms* (Bloomington, IN: Indiana University Press).

K. Armbruster and K.R. Wallace (eds) (2001) *Beyond Nature Writing: Expanding the Boundaries of Ecocriticism* (London: University Press of Virginia).

P. Armstrong (2008) *What Animals Mean in the Fiction of Modernity* (London: Routledge).

J. Bate (1991) *Romantic Ecology: Wordsworth and the Environmental Tradition* (London: Routledge).

———(2000) *The Song of the Earth* (London: Picador).

M. Bennett and D.W. Teague (eds) (1999) *The Nature of Cities: Ecocriticism and Urban Environments* (Tucson, AZ: University of Arizona Press).

A. Bleakley (2000) *The Animalizing Imagination: Totemism, Textuality, Ecocriticism* (New York: St. Martin's).

M.P. Branch and S. Slovic (eds) (2003) *The ISLE Reader: Ecocriticism, 1993–2003* (Athens, GA: University of Georgia Press).

F. Buell (2003) *From Apocalypse to Way of Life: Environmental Crisis in the American Century* (New York: Routledge).

L. Buell (1995) *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge: Harvard University Press).

———(2001) *Writing for an Endangered World: Literature, Culture, and Environment in the U.S. and Beyond* (London: Belknap Press).

———(2005) *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination* (Oxford: Blackwell).

L. Coupe (2000) *The Green Studies Reader: From Romanticism to Ecocriticism* (London: Routledge).

W. Cronon (ed.) (1996) *Uncommon Ground: Rethinking the Human Place in Nature* (London: Norton).

E. DeLoughrey and G. Handley (eds) (2010) *Postcolonial Ecologies* (Oxford: Oxford University Press).

E. Fudge (2002) *Animal* (London: Reaktion).

G. Gaard and P.D. Murphy (eds) (1998) *Ecofeminist Literary Criticism: Theory, Interpretation, Pedagogy* (Urbana, IL: University of Illinois Press).

G. Garrard (2011) *Ecocriticism* (2nd edn) (London: Routledge).

C. Glotfelty and H. Fromm (eds) (1996) *The Ecocriticism Reader: Landmarks in Literary Ecology* (London: University of Georgia Press).
U. Heise (2008) *Sense of Place and Sense of Planet: The Environmental Imagination of the Global* (Oxford: Oxford University Press).
J. Hochman (1998) *Green Cultural Studies: Nature in Film, Novel, and Theory* (Moscow, ID: University of Idaho Press).
G. Huggan and H. Tiffin (2010) *Postcolonial Ecocriticism: Literature, Animals, Environment* (Abingdon: Routledge).
M. Hulme (2009) *Why We Disagree About Climate Change: Understanding Controversy, Inaction and Opportunity* (Cambridge: Cambridge University Press).
D. Ingram (2000) *Green Screen: Environmentalism and Hollywood Cinema* (Exeter: University of Exeter Press).
R. Kerridge and N. Sammells (eds) (1998) *Writing the Environment* (London: Zed Books).
D. Mazel (2000) *American Literary Environmentalism* (Athens, GA: University of Georgia Press).
———(2001) *A Century of Ecocriticism* (Athens, GA: University of Georgia Press).
J. McKusick (2010) *Green Writing: Romanticism and Ecology* (London: Palgrave Macmillan).
C. Mortimer-Sandilands and B. Erickson (2010) *Queer Ecologies: Sex, Nature, Politics, Desire* (Bloomington, IN: Indiana University Press).
T. Morton (2010) *The Ecological Thought* (London: Harvard University Press).
P.D. Murphy (1995) *Literature, Nature, and Other: Ecofeminist Critiques* (Albany, NY: State University of New York Press).
———(1998) *Literature of Nature: A Sourcebook* (London: Routledge).
———(2000) *Farther Afield in the Study of Nature-Oriented Literature* (Charlottesville: University of Virginia Press).
B. Nelson (2000) *The Wild and the Domestic: Animal Representation, Ecocriticism and Western American Literature* (Reno: University of Nevada Press).
P. Outka (2008) *Race and Nature; From Transcendentalism to the Harlem Renaissance* (New York: Palgrave Macmillan).
D. Phillips (2003) *The Truth of Ecology: Nature, Culture, and Literature in America* (Oxford: Oxford University Press).
S.K. Robisch (2009) *Wolves and the Wolf Myth in American Literature* (Reno: University of Nevada Press).
S. Rosendale (ed.) (2002) *The Greening of Literary Scholarship: Literature, Theory and the Environment* (Iowa City: University of Iowa Press).
K. Soper (1998) *What Is Nature?* (Oxford: Blackwell).
J. Tallmadge and H. Harrington (2000) *Reading under the Sign of Nature: New Essays in Ecocriticism* (Salt Lake City: University of Utah Press).
R.N. Watson (2006) *Back to Nature: The Green and the Real in the Late Renaissance* (Philadelphia: University of Pennsylvania Press).
L. Westling (1996) *The Green Breast of the New World: Landscape, Gender, and American Fiction* (Athens, GA: University of Georgia Press).

A. Wilson (1992) *The Culture of Nature: North American Landscape from Disney to the Exxon Valdez* (Oxford: Blackwell).

Ecocriticism journals

Ecozon@ (online only)
Green Letters: Studies in Ecocriticism
Indian Journal of Ecocriticism (print only)
Interdisciplinary Studies in Literature and the Environment (ISLE)
Journal of Ecocriticism (online only)

Education for sustainable development and ecocritical pedagogy

C.A. Bowers (1993) *Critical Essays on Education, Modernity, and the Ecological Imperative* (New York: Teachers College Press).
J. Collett and S. Karakashian (1996) *Greening the College Curriculum: A Guide to Environmental Teaching in the Liberal Arts* (Washington, DC: Island Press).
H. Crimmel (ed.) (2003) *Teaching in the Field: Working with Students in the Outdoor Classroom* (Salt Lake City: University of Utah Press).
G. Garrard (2007) 'Ecocriticism and Education for Sustainable Development', *Pedagogy* 7:3, pp. 359–383.
———(2010) 'Problems and Prospects in Ecocritical Pedagogy', *Environmental Education Research* 16:2, pp. 232–245.
J. Huckle and S. Sperling (eds) (1997) *Education for Sustainability* (London: Earthscan).
C. Lewis (2005) *Reading the Trail: Exploring the Literature and Natural History of the California Crest* (Reno: University of Nevada Press).
W. Morrish and C.R. Brown (2000) *Planning to Stay: Learning to See the Physical Features in Your Neighbourhood* (Place: Milkweed Editions).
D. Orr (1992) *Ecological Literacy: Education and the Transition to a Postmodern World* (Albany: State University of New York Press).
———(2004) *Earth in Mind: On Education, Environment and the Human Prospect* (10th Anniversary edn) (Washington, DC: Island Press).
J. Palmer (1998) *Environmental Education in the 21st Century* (London: Routledge).
M. Rickinson (2001) 'Learners and Learning in Environmental Education: A Critical Review of the Evidence', *Environmental Education Research* 7:3, pp. 207–320.
J. Tallmadge (1997) *Meeting the Tree of Life: A Teacher's Path* (Salt Lake City: University of Utah Press).
M. Thomashow (1995) Ecological Identity: Becoming a Reflective Environmentalist (Cambridge: MIT Press).

———(2002) *Bringing the Biosphere Home: Learning to Perceive Global Environmental Change* (Cambridge: MIT Press).

K. Webster (2004) *Rethink Refuse Reduce . . . : Education for Sustainability in a Changing World* (Shrewsbury: Field Studies Council Publications).

A. Zwinger, C.W. Leslie, J. Tallmadge, and T. Wessels (eds) (1999) *Into the Field: A Guide to Locally Focused Teaching* (Great Barrington, MA: Orion Society).

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