Introduction

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In the semiotic philosophy of Charles Sanders Peirce, abductions are those (often preconscious or unconscious) metaphoric and/or metonymic links between signs by which new hypotheses are generated. Deductive and inductive reasoning, Peirce realised, on their own create nothing new. Newness comes from the strange half-life of signs - Derrida called them traces - whereby traces of semiosis perdure beneath self-consciousness and enable us to draw links between signs separated in conceptual space (differing) or in time (deferring) whereby new ideas come into being. Not all such new ideas will survive the logical considerations and testings in practice of self-conscious reasoning; but that they begin in a mysterious semiosic process of *différance* facilitated in what Peirce called 'plays of musement' seems indubitable.

When, in 2002, Peter Barry published the Second Edition of his useful and widely respected *Beginning Theory*, he noted (Preface to the Second Edition) that literary and cultural theory had continued to change in the seven years since the book's original publication in 1995. In particular, he had found it appropriate to include a new chapter on ecocriticism. The emergence of a new field of critical and cultural theory is, of course, an indication of the shape of the more general cultural evolution, and critical commentary on it, which Barry noticed. Thus, it might not be quite right simply to add ecocriticism to a list of other critical 'isms', but, rather, to notice what difference it introduces - one that must surely reshuffle the pack of all earlier critical and cultural theories to some extent - into the field of cultural theorisations more broadly.

As Barry notes, eco-criticism began in the USA in the late 1980s and was clearly a response to the wider growth of environmental awareness. The United Nations Intergovernmental Panel on Climate Change (IPCC) was established in 1988, and the first UN Earth Summit was held in Rio de Janeiro in June 1992. The Association for the Study of Literature and the Environment (ASLE) was formed in 1992, and its first conference held in Fort Collins in 1995. But as far as developments in literary and cultural theory were concerned, there were other pressures also. Not least among these was the inevitable eventual resistance to the less subtle Anglophone interpretations of 'continental theory' which resulted in the politically disempowering, but widely advanced, claim that humans have no access to a real world because reality is (only) constructed in language. Feeling the importance of human carelessness in regard to the fabric upon which we depend, and needing, thus, to take notice of scientific observations of both this and our earth-based and derived interdependence, ecocriticism has tended towards the phenomenological point that language is a deconstructible system abstracted

from experience and evolved through metaphor. This means that while its categorisations and forms should not be mistaken for *things*, nonetheless its roots and conditions of possibility are certainly real.

The creative exploration of *différance* takes time. As the essays in this special issue attest, ecocriticism is now at the stage of creative profusion in which the outlines of its future projects begin to be seen more clearly. Many of the essays here bear witness to the semiosis of the trace as they dip into the past, and into disparate fields in the present, in order to renew critical thought. Indeed, and whether always knowingly or not, ecocriticism has joined itself to the wider semiotic (and biosemiotic) view (noted in Noel Keough's essay here, for example) that language itself is not an 'airy nothing', but is the evolutionary response to the human need to 'bring forth a world' which is also shared by all other forms of life - albeit without specific consciousness of the fact. As Keough notes in his essay, very many thoughtful people have argued that 'the "vocation" of life (human and other …) is the bringing forth of a world' in the form of 'intersubjective communication' - or 'shared conversations'. And many 'have argued … that the rest of nature has to be a part of this shared conversation and that in fact it is a modernist ruse to pretend nature is not inescapably part of the conversation'. These thinkers, Keough also notes 'theorize that the rest of nature brings forth a world in a localized, non-hierarchical fashion, not characterized by command-and-control but by self-organization'. These claims sit square with the (bio)semiotic view, advanced by Thomas A. Sebeok and Jesper Hoffmeyer, amongst others (discussed here in Wendy Wheeler's 'Postscript on Biosemiotics'), that language, as semiosis (going much wider than human verbal language), is not at all the preserve of human life alone, but is pervasive in all life. The universe, as Peirce claimed, is 'perfused with signs'. Ecocriticism, far from being just another humanist 'ism' to be added to other anthropocentric views, represents an attempt to view the world from what David Abram has described as a 'more-than-human' perspective.[1]

The contestation of the claim that earth-life and its creatures can be reduced to human linguistic endeavours alone has thus undoubtedly formed a central part of the development of ecocriticism. If first wave ecocriticism took the form of nature writing's seemingly metaphorical (but actually not quite) listening to the 'voice' of nature, second wave ecocriticism, as discussed here in Terry Gifford's opening essay, has endeavoured to take scientific and technological development seriously because it bears so grievously upon our future and the future of our planetary home. This has involved the task of placing scientific and technological realism within a wider understanding of the ways in which a definitely successful realist practice might still not be based on a sufficiently *full* account of its own explanatory principles: sufficiently full, that is, to prevent its realism from being limited, and thus really destructive. For ecocriticism, this has increasingly meant thinking about the semantic and semiotic envelopes within which even a successful realism may remain caught.

1. David Abram, *The Spell of the Sensuous: Perception and Language in a More-Than-Human World*, New York, Vintage, 1997.

Within the ecocritics' arguments as described by Gifford, this has involved a recapitulation in miniature of literary criticism's own trajectory, from the form of phenomenological literary criticism expressed in Leavis (and elaborated in Michael Bell's book on Leavis for example[2]) through to its ecocritical coda enacted in the furious debates, also outlined by Gifford, on the ontological status of 'nature' in general, and as cultural representation more specifically. With pre-ecocritical debates on representation and reality, this project, although now widely subject to revision, has centrally hinged on socio-linguistic constructivist claims that reality is made, or constructed, in human language. But, for ecocriticism, this was, in its simplest form, never a seriously tenable position because of its central allegiance to scientific ecology. Ecocritical engagements with the question of semiosis have thus taken a rather different tack in relation to language. Rather, they have tended towards two complementary views of semiotics and semantics. The first is that language (semiosis) is neither limited to humans alone, nor is primarily about communication simply understood. Thus, ecocritics have increasingly tended to the view (expressed more than once in this volume) that language (not confined to human beings) is about the attempt to bring forth a world (world-making, or world-modelling). The second, relatedly, has been the attempt to understand human semiosis as part of wider natural and cultural (the two not being opposed) semiotic systems. In these views, science and technology are not seen as unnatural, new and alien, things, but rather as yet-to-be-properly-understood practices of evolved creative artistry which need to place themselves within a wider ecological consciousness. Modern science is, after all, a remarkably successful, though incomplete, form of world-making. Such extensions and abstractions are useful, provided they do not lose a sense of the traces by which they are tied to the earth.

2. Michael Bell, *F.R. Leavis*, London and New York, Routledge, 1988.

Contributions to this special issue are noticeably marked by the urge to understand ways in which a technological and cultural 'world-system' seen as alienated and alienating can be integrated into a wider conception of human and non-human systems. For ecocritics, this is not so much a case of, for example, undertaking Fredric Jameson's 'cognitive mapping of the present world system as such', but rather of redescribing what might now count as a good model of the world. Ecocriticism is, thus, part of a recognisable 'family' of world-making activities in which 'putting humans back in nature' need not be seen as simply the naïve gesture associated with some forms of nature writing, but must also be seen as the attempt to understand that nature and culture, far from being utterly different things, are both fully evolutionary processes characterised by non-reducible emergent strata. Ecocriticism, then, becomes one of a number of non-anthropocentric endeavours acting as cultural environmental pressures bearing upon cultural evolution (and world-calling forth) across both bio- and culturo-spheres. The strange translations of 'continental theory' in neo-liberal cultures, translations which were actually supportive of the idea that - reality being made only in language - endless growth is possible because there is no reality of finite resources, ran directly

counter to ecological arguments. One might say that the stormy confluence of scientific ecology and such strange translations of 'theory' opened up a new ecological niche in culture, and it was into this niche that ecocritics were able to move and self-organise.

How to build the shelter and the best materials to use (definition and methodology) remains at the centre of ecocritical debate. Gifford begins with an outline of ecocritical developments so far, and a focus upon its most vexed areas of argument. In particular, he considers Lawrence Buell's response to Dana Phillips's *The Truth of Ecology* - a symptomatically fraught moment in ecocritism's 'bringing forth' - in order to gauge the usefulness of Buell's contribution (especially in the face of Phillips' charges of ecocritical theoretical backwardness) via the latter's elaboration of ' three models for thinking about the reciprocity between text and environment: as rhetoric, as performance, and as world-making'. What Buell is after, Gifford reports, is 'a macroperspective that allows moral judgements to be made about contesting rhetoric "without falling into a doctrinaire cultural constructivism or a doctrinaire objectivism"'.

A number of essays deal directly with ecocriticism's relationship with theory. That ecocriticism has entered a second more self-critical stage was signalled recently by the publication of an article by Serpil Opperman in *Interdisciplinary Studies in Literature and Environment*. This journal, central to the American wing of ecocriticism, has now published a number of articles questioning the realist assumptions of first wave US ecocriticism. Opperman states that 'in order to effect change in today's literary and academic community, ecocriticism needs to become more fully engaged in a dynamic interaction with literary theory'. Dana Phillips' essay expands on some of the concerns explored in his book *The Truth of Ecology*. Taking Jonathan Bate's books on Romanticism and ecology as his subjects, Phillips explores the ways in which ecocritics can fall into the traps of a simplistic realism, concluding with an assertion that Bate's resistance to theory leads him to privilege a naïve pastoralism. A way forward for ecocriticism which avoids both the limits of a naive realism and the dangers of a purely constructionist approach to nature is explored in Patrick Curry's essay 'Nature Post-Nature'. Curry asks us to take seriously the idea that all our being, including reasoning, is immersed 'in this vast and intricate discursivity, the more-than-(but including)-human.' Curry views both objectivist and constructionist interpretations as misleading as neither really appreciate the relational quality of reasoning and experience. Curry's concept of ecopluralism suggests a new and critically fruitful way of understanding our place in the world.

John Parham's 'The Poverty of Ecocritical Theory' pursues similar worries concerning the most critical aspects of the ecocritical project by noting that the latter's 'confrontation with critical theory often took the generic form of a reassertion of "place" against the postmodernist construction of "space"'. Noting more recent ecocritical attacks (such as Dana Phillips') on such idealised concepts of environment, Parham turns to British historian E.P. Thompson's

essay 'The Poverty of Theory' in order to provide a model for thinking the conjunction of imaginative concept with material base. Clearly, this is a reworking of the modernity-dilemma noted in J.S. Mill's essays on Bentham and on Coleridge in which (imaginative) concept (and thus difference) plays out its vexed relationship with the same (material and evolutionarily evolved) ground which all humans also share - not least (Bentham's point) as juridical subjects. Just as Thompson argues that theory must be based in a proper (although non-positivistic) cognisance of empirical facts, so, Parham argues, ecocriticism must be based on a similar necessary 'dialogue between concept and evidence … conducted by successive hypotheses, on the one hand, and empirical research on the other'. And as Thompson understands the contingency of theory upon such a dialogue, so, Parham argues (citing Greg Garrard) that such a '"poetics of responsibility" …would recognise, and continually re-examine, the linguistic and cultural tropes and metaphors that, in *conceptualising* our place within the *natural* system, impact upon areas such as scientific practice and political decision-making' (our italics.) Drawing on Thomson's postscript added to the revised, 1977 edition of *William Morris: Romantic to Revolutionary* (a piece, Parham notes, described by Perry Anderson as one of Thompson's 'most important political and theoretical statements'), Parham argues that Thompson's work on Morris appears to have impacted upon his thinking 'in two (interconnected) ways: a re-examination of his own Marxism; and a surfacing of ecological ideas, albeit sporadically, in his later work'. Considering Thompson's late-flowering ecologism, Parham offers a comparison between Jonathan Bate's and Thompson's own readings of the poet John Clare. He concludes that 'Thompson's work offers a differently "conceived" Romanticism from that posited by Bate and one which might form the basis, therefore, for a new approach to ecocritical work' which (as Martin Ryle has put it) 'might help us to re-imagine, political economy on an ecological basis'.

With a similar emphasis on the material conditions of all experience, Jonathan Coope explores 'The Ecological Blindspot in Postmodernism', via the work of Theodore Roszak and Charlene Spretnak, in order to offer an 'attempt at ecological outreach work to the postmodern' as his 'contribution to engaged dialogue'. Articulating again the significant, unplanned, theme which emerges in so many of the essays in this special issue, Coope notes Roszak's prescient 1960s insights concerning the importance of questions of scale and context in late technological modernity. The problem of modernist monumentalism (of ideas as much as architecture) has, he argues (and not dissimilarly to Thompson's own growing insights into weaknesses in traditional Marxist thought), been insufficiently addressed by 'traditional leftist social critics'. Far from 'living on thin air', he implies, postmodernist 'groundlessness' constitutes a hopeless disavowal of the unbearable heaviness of being experienced under the apparently inescapable logic of a global world-system. Coope draws our attention to eco-feminist Charlene Spretnak's argument, in similar vein, that the oppressiveness of this system cannot be

refuted by a totalising counter-gesture which opposes the constructive power of language to the destructive power of capital, but can only be challenged by a repeated affirmation of 'the ecological foundations of the self' in a very real environment on a very real earth.

Noel Keough's 'Sustaining Authentic Human Experience in Community' argues that while 'ecological modernization (EM) has become the dominant theoretical framework of sustainable development', a more radical alternative pays attention to matters of viable scale and, centrally, to qualitative aspects of what a necessary sense of community actually consists in. Keough's ecophenomenological emphasis is on relatedness and specific context as the focus of environmental and social ecology. 'Self-identity' and 'individual well-being' are, he argues, strictly speaking meaningless ideas in the absence of an understanding of the social constitution of human self. In place of these, he offers a model of 'the most elemental, irreducible unit of enduring, sustaining, self-regulating, self-organising and self-reproducing relationship with others … [as the] place-based geographic community'.

This emphasis on the located *semiotic* nature of environment (described by the biologist Jakob von Uexküll in terms of species *umwelt*) is further developed in Cary Wolfe's essay on Temple Grandin, and on the ways in which the experience of autism can open up questions of phenomenological experience which take us beyond the normative sensuous world which is the taken-for-granted 'common sense' of Enlightenment assumptions about subjectivity. As with Ron Broglio's essay on Heidegger's shepherd of being and Nietzsche's satyr, Wolfe's animal studies perspective provides a welcome and widening dimension to ecocritical attempts to move beyond humanist anthropocentrism, towards a more comprehensive and less exclusive understanding of 'world systems'. It does so, not least, by casting a shrewd eye on governing conceptions of dominant Western models of self and self-consciousness as explored in the deconstructive philosophy of Jacques Derrida. In doing so, Wolfe's essay also implicitly raises the question of whether *Umwelt* (or 'species environment' in von Uexküll's terms) is not too blunt an analytic (or perhaps taxonomic) tool. Temple Grandin's world (and other supposedly 'disabled' worlds) are, in fact, worlds-brought-forth which are not only 'abled' and 'enabled' differently, but are also, as Wolfe argues, worlds which might help us to reconfigure normative Enlightenment juridical assumptions about how a more widely embraced world might be ecocritically modelled and called forth.

Ron Broglio's reading of the difference between Nietzsche's and Heidegger's ideas of feasting raises the fundamentally alimentary nature of self-as-relationship both to others and, thereby, to knowledge, and offers an instructive contrast between classical and post-Christian philosophies of sacrificial consumption and the identities these vouchsafe. Contrasting Heidegger's shepherd of being with Nietzsche's satyr, Broglio argues that the latter's half-man half-beast being is embodied in Dionysian feasting. There, 'a play of "material" surfaces', rather than the privileged interiority

of Heidegger's shepherd of being, allows an insight into Dionysian art as springing not from Apollonian distance but from immersive experience in the bodily caesura of similarity and difference expressed in the satyr. It is this 'pessimism of strength', Broglio argues, which allows Greek tragic drama to 'look into the abyss … despite the darkness of a life without transcendental truth or meaning'. For Broglio, it is Nietzsche's and the satyr's refusal of transcendence, and 'the necessity of error' in sensuous experience, which affirms in Zarathustran closeness to the earth that the true is not what *is*, but is, rather, 'unfettered becoming'.

Adrian Ivakhiv opens his essay on 'The Geopolitical Unconscious' by noting that Fredric Jameson's use of the latter term is intended to indicate that 'all thinking today is also, whatever else it is, an attempt to think the world system as such'. Ivakhiv's essay takes Jameson's understanding of postmodern culture, as consisting in the various attempts to map - via 'heralding, reflecting, and responding to the latest stage in the development of capitalism' - this unconscious, by exploring its ghostly ecological dimensions. His argument is that 'the contemporary world system can hardly be thought today without reference to the larger - and until recently unthinkable - totality of the ecological system which both sustains and interpenetrates with the political-economic system'. Accordingly, Ivakhiv notes the extent of political activity that, in the late 1980s and early 1990s, saw 'the creation of the Intercontinental Panel on Climate Change, the release of the Brundtland Commission Report *Our Common Future*, the popularization of the term 'sustainable development,' and the high-profile international mega-event in Rio de Janeiro which came to be known as the Earth Summit - all this followed, in 1993, by 'the election of a U.S. president whose running mate had written an environmentalist manifesto, *Earth in the Balance*, the title of which was meant to suggest how precariously poised we were on the cusp of dramatic, if not catastrophic, change'. Ivakhiv asks what happened to 'this feverish five- or six-year period [which] … by the middle of the decade … was all but eclipsed by the economic rush of post-Cold War Clinton-era globalization'. His answer, in Jamesonian style, is to look at the ghosts of this unconscious which appear at the haunted edges of cultural production during the period in films such as Robert Altman's 1993 adaptation of Raymond Carver's *Short Cuts*; Paul Thomas Anderson's 1999 *Magnolia*; and Sam Mendes's 1999 *American Beauty* for instance. These, while not seemingly centrally concerned with ecological matters, nonetheless evince, Ivakhiv argues, barely repressed anxieties about nature's now dangerously occulted power.

Continuing the theme (explored, for example, in Roger Luckhurst's *The Invention of Telepathy*) of the ways in which technological development produces ghostly after-images, Bill Gray's essay on Robert Louis Stevenson notices the way in which Stevenson's 'engineering family' background, and the latter's concern with nature-defeating constructions such as light-houses and road-works, re-emerges, in Stevenson's literary life, in a traveller's preoccupation with Pandemonic forces which prefigure, and lead to, the *fin-de-siècle* cults of

'Pan and the open road' discovered in Stevenson's travel writing. Gray shows how the capricious god that engineering should surely have killed once and for all in fact lives on, not only in the neo-paganism of Kenneth Graham's *Wind In the Willows*, which celebrates 'the open road' in the uneasy confluence of both its machine and Arcadian dimensions, but also in Stevenson's similarly disjunctive travelling encounters with colonialism and the natural world in Samoa.

Finally, Wendy Wheeler's 'Postscript on Biosemiotics' suggests both a new theoretical resource for ecocriticism which might be capable of reconciling its arguments about scientific realism and semiotic constructionism without doing unnecessary violence to either, and also a new, biosemiotically informed, way of thinking about biological and cultural evolution as emergent semiosic strata in a living world 'perfused with signs'. Deploying Peircean and post-Peircean semiotics, rather than Saussurean and post-Saussurean semiology, Wheeler argues that we can make better ecological sense of cultural creativity (in the sciences and in the arts), and of what might count as progress, via an understanding of Peirce's conception of logical inferences, and of his logic of abduction in particular. This, she suggests, allows us to understand that the emergence of new knowledge always depends upon a knitting and knotting into the past - a going backward in order to go forward - whereby newness is the result of abductive re-readings (involving 'inspired guesses' in 'the play of musement') in which antecedent signs, half forgotten or dimly remembered in affect (like nostalgia), spring into new life in the light of subsequent experience. In a reading of two essays, one on literary realism and one on Romanticism, Wheeler suggests that Peircean abductions may describe the movements of the Derridean trace, not only in verbal language but in the legibility of material surfaces in culture and in nature. Wheeler's 'Postscript' is, thus, intended as a reflection on the general significance of postscripts - as supplementary 'throwaways' which might, nonetheless, suggest a re-reading of what, as 'main' text, has gone before - and also as an instantiation of the abductive gesture (found in several essays in this volume) whereby what has been said can be put to work again, with no guarantee of success, but with the possibility of hope in regard to what Michael Polanyi called the certainty of the 'more there is definitely to be known'.

This special issue of *new formations* on Ecocriticism and Culture reports on the current struggle about 'meaning' and 'signs' which marks both the semiotic revolution in studies of culture and politics, and also, hopefully, the latter's adventure which Alfred North Whitehead described as life's 'creative advance into novelty'. The creative adventure and advance which ecocritical thought tries to encompass lies in the attempt to think the world differently while remaining true to what, also, stays the same, or common (and as scientifically described in taxonomies which must remain open to revision), to all life on this little orbiting globe where we live.