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Seasonal Disturbances: Environment, Climate Change, and Anthropocene Poetics of
Relation in Karen McCarthy Woolf's Poetry

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It's quite powerful and it's quite frightening to think of the Anthropocene in this way – almost like scar tissue, that this is occurring. The speed at which these changes are happening is accelerating. And we do get to these points of the unknown. (Karen McCarthy Woolf and Yvonne Reddick, 'Seasonal Disturbances,' p. 6).

Is this some community we rhizome into fragile connection to a place? Or a total we involved in the activity of the planet? (Edouard Glissant, p. 206.)

Ocean pollution, extinction, rising seas, nuclear fallout, the climate crisis: artificial changes to our planet are extensive. Scientists have proposed the (contested) term 'Anthropocene' to encapsulate the enormity of these changes. Authors, too, are entering debates about environmental damage in the Anthropocene, grappling with the challenges of representing its vastness, its ethical dilemmas, and its human impacts. Climate change in particular is such a colossal threat that some literary critics have argued that it verges on unrepresentable in fiction.¹ Yet writers are engaging with the Anthropocene across literary genres, inventing new forms to tackle the demands of presenting environmental dangers at once personal and global, planetary and human. Karen McCarthy Woolf is one such writer.

McCarthy Woolf is a poet, editor and ecopoetry scholar, based in London. Her collection *Seasonal Disturbances* forms part of the recent flourishing of environmental poetry that engages with the predicament of living on an imperilled planet. Over the past five years, initiatives such as the Poetry School's Ginkgo Prize for ecopoems and Simon Armitage's Laurel Prize for ecological poetry collections have reflected, and further stimulated, the development of this poetic genre in Britain and beyond. McCarthy Woolf's book is currently shortlisted for the inaugural Laurel Prize. *Seasonal Disturbances* fragments, reshapes and reconstructs lyric poetry and found texts, suggesting moments of ecological connection in an age of widespread environmental violence and human injustice. In McCarthy Woolf's poems, scientific information about plastic pollution and subverted texts by Edwardian naturalists rub shoulders with lyric meditations about the Thames and harrowing tales of refugees. Since McCarthy Woolf's academic research focuses on material ecopoetics, hybridity and the

¹ Certain authors and environmental literary critics have argued that literary fiction is ill-equipped to engage with climate change. Amitav Ghosh argues that 'the age of global warming defies both literary fiction and contemporary common sense,' acknowledging that 'Poetry ... has long had an intimate relationship with climatic events' (Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable* (Chicago: University of Chicago Press, 2016), p. 26). Timothy Clark acknowledges that 'innovative work' is arising in the arts, but 'the challenges and difficulties faced by such art have also been striking, given that crucial forms of environmental destruction cannot immediately be seen or localized, and resist representation at the kinds of scale at which most poetry, narrative or drama operate (2015, pp. 175-6.) He wonders, 'does the Anthropocene form a threshold at which art and literature touch limits to the human psyche and imagination themselves?' He opines that 'Linguistic narrative in particular seems at issue solely as that mode which, by implication, fits least well the demands of the Anthropocene' (p. 187) as he sees them as bound to human intentions and narratives. His argument rests on the insubstantial grounds that ecocritics including Timothy Morton and Clare Colebrook engage with few literary texts in their latest books. This is an example of literary theory informing literary theory while being wilfully blind to developments in experimental literature. See Timothy Clark, *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* (London: Bloomsbury, 2015), pp. 175-176. Clark does engage with American environmental poetry and climate change in *The Value of Ecocriticism* (Cambridge: Cambridge University Press, 2019), chap. 3. For a critical standpoint that recognises how authors are reshaping form, narrative and genre in climate change fiction, see Adeline Johns-Putra and Adam Trexler, 'Climate change in literature and literary criticism,' *WIRES Climate Change*, 2.2 (March/April 2011), pp. 185-200.

sacred, her poetry is ripe for interpretation in the light of influential developments in the environmental humanities. Her evocation of the roots of plants and the routes of the Black Diaspora suggest new avenues of enquiry for bringing together ecopoetics and Anthropocene scholarship with theories of diaspora. In this article, I build on Martiniquan poet and philosopher Edouard Glissant's concept of the 'poetics of relation,' expanding it to encompass relations between human beings, other species, and environmental agents. McCarthy Woolf evokes diverse and vast ecological relationships: the significance of trees to a global array of cultures; the international networks of migration used by birds and people; webs of ocean currents, river-routes and climatic processes. Applying the work of important environmental humanities scholars such as Anna Tsing and Donna Haraway to poetry, and expanding Glissant's model of relation, I argue that McCarthy Woolf's poems examine extensive and often unexpected connections between humans and nonhumans. This is manifest formally in hybrid poetic creations, and thematically in images of connecting plant roots and expansive river-systems.

McCarthy Woolf's poetry has engaged with ecological themes since her first book, *An Aviary of Small Birds* (Carcamet 2014). *An Aviary of Small Birds* was a book of the month in *The Guardian* newspaper; a collection of elegies for the a stillborn son, the book deals extensively with plants, animals and birds. *Seasonal Disturbances* (Carcamet 2017) is McCarthy Woolf's second collection; it was a Poetry Book Society Commendation and a Poetry School Book of the Year for 2017. Shortlisted for the inaugural Laurel Prize, the judges' decision to select McCarthy Woolf's book reflects founder Simon Armitage's intention to create an award 'in recognition of this growing body of work in poetry addressing climate change.'² Highly cognisant of climate breakdown, the poems are scientifically informed and politically aware; yet they also deploy wry humour and offbeat character sketches. A boldly interdisciplinary practitioner, McCarthy Woolf has collaborated with eXXpedition, a transdisciplinary women's research voyage to monitor ocean plastics; with artists such as Sophie Herxheimer on *Voyage*; with filmmakers, composers, and with the photography organization Cape Farewell. Her essay 'Green Roots, Brown Shoots' sets out to 'diversify ecocritical discourse,' arguing that 'writers of colour are read by default for identity-oriented issues,' an assumption that overlooks their other important themes. McCarthy Woolf's ecocritical scholarship offers new ways to interpret poets such as Kei Miller and Vahni Capildeo through an ecopoetic lens,³ and it provides insights into McCarthy Woolf's own creative process: 'I've been conscious that as a writer of colour I've wanted to spotlight environmental concerns. For me writing 'about' flowers (or water or birds...) is inevitably a political act: how could it not be with bee population die-off or the Bayer-Monsanto merger?''⁴

Science, Culture and the Anthropocene

The activities of humans – some much more than others – have wreaked profound environmental destruction. The Anthropocene is the proposed name for a new geological time-period, shaped by human actions. Published in English by atmospheric chemist Paul Crutzen and lake sediment biologist Eugene Stoermer (2000), this concept is as controversial

² Simon Armitage, interviewee, and Alison Flood, interviewer. 'Simon Armitage: Nature has come back to the centre of poetry.' *The Guardian*, 21 Nov 2019, <https://www.theguardian.com/books/2019/nov/21/simon-armitage-nature-has-come-back-to-the-centre-of-poetry> [accessed 24th Sept 2020.]

³ Karen McCarthy Woolf. 'Green Roots, Brown Shoots,' Ginkgo Prize for Ecopoetry, 2019. < <https://ginkgoprize.com/green-roots-brown-shoots-by-karen-mccarthy-woolf/>> [accessed 25 Sept 2020.] ---, 'Hybrid Hierophanies: Where Rastafari Meets Religious Ecology in Kei Miller's *The Cartographer Tries to Map a Way to Zion*,' *Journal of Foreign Languages and Cultures* 3.1 (June 2019): 91-102.

⁴ Karen McCarthy Woolf. 'Green Roots, Brown Shoots.' Ginkgo Prize for Ecopoetry, 2019.

in the humanities as it is contested among geologists. Yet the term is permeating the cultural sphere, from the poetry journal *Anthropocene* to leaders in *The Economist* and *National Geographic*.

Scientists' proposed starting dates for the Anthropocene are contested and various. They include: overhunting of large land-animals at the end of the last Ice Age;⁵ forest clearance and agriculture 8-5,000 years ago;⁶ the environmental and human impacts of the conquest of the Americas;⁷ climate change after the Industrial Revolution of the late 1800s;⁸ nuclear testing in 1945;⁹ and the 1950s' increase in population and resource consumption (the 'Great Acceleration').¹⁰ The majority of the Anthropocene Working Group favour mid-20th century radioactivity from nuclear tests as a likely marker in future rock strata. They also point to the Great Acceleration as a simultaneous development.¹¹ The Anthropocene is a reminder that human beings are inextricably connected to Earth's vast climatic, geological and biological systems. As such, it is a crucial concept for environmental culture.

Humanities scholars have sounded many cautionary notes about this proposed new epoch, not least due to its contentious nomenclature. A broad array of cultural thinkers, from historians of science to literary critics, consider the Anthropocene as a problem to be debated, rather than a concept to accept uncritically. Scientific discourse on the Anthropocene has contained hidden, ideological strands that humanities scholars have found ethically problematic. In their landmark article proposing the Anthropocene as a new geological epoch, Crutzen and Stoermer declare that 'mankind's activities' have become 'a significant geological, morphological force.'¹² Yet lumping all human beings together as 'mankind' risks some nonsensical conflations. One can hardly compare the environmental impacts of an aviation tycoon with those of a hunter-gatherer who has never used fossil fuels. Moreover, the label 'mankind' risks ignoring the fifty-one percent of the population who identify as female. (Edouard Glissant's question about whether 'we' represent a small community connected to place, or a global totality, is highly pertinent here.)¹³ Issues with the Anthropocene that have come under scrutiny from humanities scholars include its origins in a masculinist narrative of 'conquering' nature, its overlooking of capitalism, its blindness to global inequalities, and the

⁵ For information on vast human-caused changes since the Holocene, see Bruce D. Smith and Melinda Zedler. 'The Onset of the Anthropocene,' *Anthropocene* 4 (December 2013): 8-13 and Jackson Landers, 'Since the Late Pleistocene Humans Were Already Radically Transforming the Earth.' *Smithsonian.com*. 7 June 2016. <<https://www.smithsonianmag.com/smithsonian-institution/new-research-shows-late-pleistocene-humans-transforming-habitats-180959324/>> [accessed 6 Nov 2018]

⁶ William Ruddiman. 'The Anthropogenic greenhouse era began thousands of years ago,' *Climatic Change* 61 (2003): 261-93.

⁷ Simon L. Lewis and Mark A. Maslin, *The Human Planet: How We Created the Anthropocene* (London: Penguin, 2018).

⁸ Paul J. Crutzen and Eugene F. Stoermer. 'The "Anthropocene,"' *Global Change Newsletter* 41 (2000): 17-18.

⁹ Jan Zalasiewicz, Colin N. Waters, Mark Williams, Anthony D. Barnosky, Alejandro Cearreta, Paul Crutzen, Erle Ellis, Michael A. Ellis, Ian J. Fairchild, Jacques Grinevald, Peter K. Haff, Irka Hajdas, Reinhold Leinfelder, John McNeill, Eric O. Odada, Clément Poirier, Daniel Richter, Will Steffen, Colin Summerhayes, James P.M. Syvitski, Davor Vidas, Michael Wagerich, Scott L. Wing, Alexander P. Wolfe, An Zhisheng, Naomi Oreskes. 'When did the Anthropocene begin? A mid-twentieth century boundary level is stratigraphically optimal,' *Quaternary International* 383 (2015): 196-203.

¹⁰ Jan Zalasiewicz, Mark Williams and Colin N. Waters. 'Can an Anthropocene series be defined and recognized?' *Geological Society, London, Special Publications* 395 (11 Mar 2014). <http://sp.lyellcollection.org/content/early/2014/03/11/SP395.16> [Accessed 7 Nov 2018].

¹¹ Working Group on the 'Anthropocene.' 'Results of a binding vote by AWG.' 21 May 2019 <<http://quaternary.stratigraphy.org/working-groups/anthropocene/>> [4 Sept 2019].

¹² Paul J. Crutzen and Eugene F. Stoermer. 'The "Anthropocene,"' *Global Change Newsletter* 41 (2000), 17.

¹³ Edouard Glissant, *Poetics of Relation*. Translated by Betsy Wing (Michigan: University of Michigan press, 1997) [French edn 1990], p. 206. All further citations are from this edition. Page numbers are given in parentheses in the text.

way it risks downplaying the importance of nonhuman agents to Earth's systems.¹⁴ A crucial problem with the Anthropocene is race, and this is particularly pertinent to McCarthy Woolf's project to diversify ecocritical debates. Theorist Karen Yusoff brands the Anthropocene a narrative of 'White Geology;' for her, the concept glosses over the backbreaking toil of mining slaves, and ignores the severe impacts of pollution and climate change on the world's poorest.¹⁵ Indeed, several postcolonial thinkers see climate change as the ultimate manifestation of environmental racism. Amitav Ghosh points out that Africa and Asia will bear the brunt of climate-related damage; this risks reinforcing the balance of world power along former imperial lines.¹⁶ Climate change migration is an important theme for McCarthy Woolf, in poems such as 'Kingfisher' and 'The Science of Life 493.'

Responses to the Anthropocene from the humanities are stressing the crucial nature of non-western perspectives that challenge the perceived separation between humans and other species. Vibrant, generative, organic meshes and webs are key to the work of Donna Haraway (on powerful nature-goddesses such as Tangaroa and Pachamama) and Anna Tsing (on environmental regeneration and the Japanese *matsukake* mushroom). Haraway's proposed alternative to human-centred thinking in the Anthropocene is to 'make kin' with nonhuman agents in an intricate process of multi-species 'collaboration' (2016 56) – a powerful alternative to Anthropocene narratives that risk aggrandising humans. Haraway's alternative label 'Chthulucene' is envisaged as a symbiotic, anti-anthropocentric alternative to the Anthropocene. Haraway has coined the term to suggest the 'diverse earthwide tentacular powers' that make up ecological networks. Inspired by the 'chthonic powers of Terra', Haraway's alternative term, loosely derived from *χθών* – chthōne, earth – can be glossed as 'new age of Earth.'¹⁷ Tsing's critique of the environmental cost of capitalism argues for the need to be mindful of our interconnected dependence on other forms of life, on this 'damaged planet.' She argues that 'interspecies entanglements that once seemed the stuff of fables are now materials for serious discussion among biologists and ecologists, who show how life requires the interplay of many kinds of beings. Humans cannot survive by stomping on all the others.'¹⁸ A further thinker of interconnected meshes whom McCarthy Woolf mentions in her essay 'Green Roots, Brown Shoots' is theorist Timothy Morton: 'That sense of the 'Other' and how it is both dependent on and undermines the human interaction with 'nature' is a critical part of ecological theory, as popularized by materialist thinkers such as Timothy Morton.'¹⁹ Morton deconstructs western notions of 'nature' as separate from human

¹⁴ The Anthropocene Working Group was initially all male, a problem noted by Kate Raworth in 'Must the Anthropocene be a Manthropocene?' *Guardian* Opinion sec., 20 Oct 2014. <https://www.theguardian.com/commentisfree/2014/oct/20/anthropocene-working-group-science-gender-bias> [accessed 30.09.20]. For further work on gender and alternatives to the term 'Anthropocene' see Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham NC: Duke University Press, 2016), especially p. 47. Rob Nixon discusses inequality in 'The Great Acceleration and the Great Divergence.' *MLA Profession* 2014, <https://profession.mla.org/the-great-acceleration-and-the-great-divergence-vulnerability-in-the-anthropocene/> [accessed 30.09.20]. For a critique of the 'Anthropocene' as a human-centred term, see Eileen Crist, 'On the Poverty of our Nomenclature'. *Environmental Humanities* 3 (2013): 129-47. For an analysis of capitalism as the root of Anthropocene evils, see Rob Nixon, 'The Great Acceleration and the Great Divergence,' *MLA Profession* 2014. See also Jason W Moore, 'The Capitalocene, Part I: on the nature and origins of our ecological crisis,' *Journal of Peasant Studies* 44.3 (2017): 594-630. In addition, see Slavoj Žižek, *Living in the End Times*, (London: Verso, 2010). For Anna Lowenhaupt Tsing's view on capitalism and environmental exploitation, see *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, (Princeton: Princeton University Press, 2015).

¹⁵ Karen Yusoff, *A Billion Black Anthropocenes or None* (Minneapolis: The University of Minnesota Press, 2018), p. xii, p. xiii.

¹⁶ Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable*, pp. 136-43.

¹⁷ Haraway 2016, p. 101, p. 31.

¹⁸ Anna Lowenhaupt Tsing. *The Mushroom at the End of the World*, p xii.

¹⁹ Karen McCarthy Woolf, 'Green Roots, Brown Shoots.'

beings in a series of monographs.²⁰ *Seasonal Disturbances* is an important poetic response to such theories – a practice-based articulation of McCarthy Woolf’s idea that Earth is an ‘interbiotic system to which we contribute and belong.’²¹

A Poetics of Anthropocene Relation

If the Anthropocene confronts us with the disturbing evidence of artificial damage to Earth’s systems, how might we relate to others – human and nonhuman? Considering our connections to a whole array of other species, from bacteria to blue whales, is becoming increasingly urgent, given that we depend on such connections for survival. Here is where McCarthy Woolf’s poetry suggests that connection and collaboration between species is urgently needed – although her work remains mindful of the environmental ‘scar tissue’ that ecological destruction leaves in its wake.

Since McCarthy Woolf’s poetry evokes her father’s journey from Jamaica to London (‘Voyage’), poetic theories from the Caribbean are especially apt for interpreting the way she considers relation. Edouard Glissant is an important figure for scholars of world literatures and international poetry, and also for ecocritics and environmental humanities researchers. Jana Evans Braziel has expanded his model by proposing a “poetics of (eco-)relation”,²² while scholars from Elizabeth De Loughrey²³ to Karen Yusoff engage with his work. Karen Yusoff’s *A Billion Black Anthropocenes or None* quotes Glissant’s *Poetics of Relation*, quoting Glissant’s view that an ethics of relation means ‘consent[ing] not to be a single being.’²⁴ Yet while Yusoff’s work focuses largely on human injustices, and on the lithic and earthy processes of mining and toil, my contention is that Glissant’s *Poetics of Relation* is aware of far broader ecological systems than Yusoff implies. Indeed, Glissant’s idea of relation is expansive enough to encompass links between an array of vegetal, oceanic, alluvial and organic systems, along with human participants in them. His oceanic and rhizomatic images suggest powerful alternatives to accounts of the Anthropocene that focus on the ascent of man or on lifeless geological strata,²⁵ as his work is cognisant of vibrant, organic, multi-species networks. McCarthy Woolf’s ecopoetry revels in such inter-species networks.

The oceanic and the rhizomatic; fibrillar routes and fluid molten rock; play a significant part in Glissant’s poetics of relation. His essay ‘The Black Beach,’ for example, explores the interconnected systems of volcanoes and trees, weather and oceans (pp. 121-127). Indeed, ‘The Black Beach’ could be seen as the most ecologically-aware essay in *Poetics of Relation*, as Glissant mentions ‘the Earth’s illnesses’ (p. 125) – both environmental and human. *Poetics of Relation* begins in the bowels of the slave-ship, and his term ‘fibril’ for the wake of such ships (Glissant p. 5) uses a word more usually associated with plant roots

²⁰ Timothy Morton, *Ecology Without Nature: Rethinking Environmental Aesthetics* (2009), *The Ecological Thought* (2010) and *Hyperobjects: Philosophy and Ecology After the End of the World* (2013).

²¹ Karen McCarthy Woolf and Dom Bury, ‘Grievous Bodily Harm – Karen McCarthy Woolf and Dominic Bury talk climate change, grief and decolonising ecopoetics’ *Magma: The Climate Change Issue*. *Magma* 72 (Autumn 2018): 20-23 (p. 22).

²² Braziel, Jana Evans. “ ‘Caribbean Genesis’: Language, Gardens, Worlds (Jamaica Kincaid, Derek Walcott, Edouard Glissant).’ In Elizabeth DeLoughrey, Renée Gosson, and George Handley, eds. *Caribbean Literature and the Environment: Between Nature and Culture*. Charlottesville: Virginia UP, 2005. Pp. 110-126 (p. 112).

²³ See for example Elizabeth De Loughrey, ‘Island Ecologies and Caribbean Literatures,’ *Tijdschrift voor Economische en Sociale Geografie* 95. 3 (2004), pp. 298–310.

²⁴ Karen Yusoff, *A Billion Black Anthropocenes or None*. Minneapolis: The University of Minnesota Press, 2018, p. 91.

²⁵ For a critique of purely geological, stony, inert accounts of the Anthropocene, see Stacy Alaimo, ‘Your Shell on Acid: Material Immersion, Anthropocene Dissolves’ in *Anthropocene Feminism*, ed. by Richard Grusin (Minneapolis: Minnesota University Press 2017), pp. 89-120.

and muscle fibres (*OED*) than with the traumas of the Middle Passage. The ocean remains a cardinal preoccupation for Glissant, yet if his poetics of relation is abyssal, it is also alluvial: '[t]he unconscious memory of the abyss served as the alluvium for these metamorphoses' by which exiled populations formed 'an alliance with the imposed land' (p. 7). The river is a crucial trope for McCarthy Woolf's poetry, where the Thames features as a conduit for voyages of connection and discovery, also carrying the pain of forced migration and personal grief. The linking fibril, the connecting ocean, the fertile river-soil, the fragile roots that people of African descent can put down after the most harrowing deracination: Glissant's imagery suggests networked relations between plants, water and humans. Most notably organic is Glissant's deployment of the image of the rhizome as a connecting mesh between places and people. Developing Deleuze and Guattari's notion of the rhizome as a non-hierarchical image for connectivity, Glissant argues that 'Rhizomatic thought is the principle behind what I call the Poetics of Relation, in which each and every identity is extended through a relationship with the Other' (p. 11). (McCarthy Woolf takes up this capitalisation of the 'Other' in her poem 'Here', which explicitly relates to migration).²⁶ Glissant clearly evokes environmental as well as human issues when he describes threats to the world: '[I]n the poetics of Relation, one who is errant (who is no longer traveller, discoverer, or conqueror) strives to know the totality of the world yet already knows he will never accomplish this – and knows that is precisely where the threatened beauty of the world resides' (p. 20). Glissant's perspective on humanity's activities is highly pertinent to Anthropocene debates about race, Global North and Global South, and human impacts on planetary systems, since it encompasses both local and global connections: 'Is this some community *we* rhizome into fragile connection to a place? Or a total *we* involved in the activity of the planet?' (p. 206.) McCarthy Woolf further develops such a poetics of relation, expanding Glissant's oceanic fibrils, watery connections and flourishing rhizomes to create an enmeshed and 'interbiotic' picture of the Anthropocene.

The Anthropocene and Poetic Form

Such a knotty, enmeshed concept of people and planet is leading authors to reshape established literary forms. If ecopoetics scholars initially examined lyric poetry and traditional poetic forms, more recent ecopoetry scholarship has favoured experimental poetic genres that eschew a stable lyric voice. The supposed divide between formally traditional poetry and the avant-garde, between the lyric and L-A-N-G-U-A-G-E, is the subject of extensive critical debate in the wider field of poetry and poetics,²⁷ and such debates inflect ecopoetics scholarship. If Jonathan Bate's *The Song of the Earth* (2000) largely engaged with lyric poetry, more recent ecopoetics research mainly favours experimental modes. Jonathan Skinner founded *ecopoetics* journal in 2001, and is in favour of a poetry that is 'frank about the materiality of language, whether via image or sound or both', demanding a move beyond 'uncritical mimesis.' Opening up further formal possibilities for ecopoetry, Skinner approves of borrowing concepts from earth sciences and the languages of America before European incursions.²⁸ When writing about climate change, critic Matthew Griffiths notes that 'Modernist aesthetics is much better equipped to articulate the complexities and nuances with which climate change confronts us than [...] traditions of nature poetry.'²⁹ Lynn Keller's analysis of poetry of the 'self-conscious Anthropocene' takes in poets who are 'often more or

²⁶ Karen McCarthy Woolf, *Seasonal Disturbances* (Manchester: Carcanet, 2017) p. 53. All further citations are from this edition. Page numbers will be given in parentheses in the text.

²⁸ Jonathan Skinner, 'Why Ecopoetics?' *ecopoetics* 1.1 (winter 2001-02): 105-6.

²⁹ Matthew Griffiths, *The New Poetics of Climate Change: Modernist Aesthetics for a Warming World* (London: Bloomsbury, 2017), pp. 9-10.

less experimental,³⁰ while Heather Milne finds that ‘much innovative and avant-garde poetry is deeply engaged with the pressing social, economic, and geopolitical issues of our times.’ For Milne, it enacts this complex critique formally and compositionally.³¹ Milne does admit that ‘[m]uch of this poetry is unintelligible when read through traditional strategies of literary analysis.’³² A potential pitfall of such poetic strategies is that they risk ‘straining the boundaries of accessibility, relevance and even readability’ – Timothy Clark certainly finds this with Evelyn Reilly’s experimental poem *Styrofoam*.³³ The North American ecopoetic avant-garde is creating some daring and provocative experiments, including Christian Bök’s aforementioned ‘biopoetry,’ and Adam Dickinson’s collection *Anatomic* (2019) that riffs off pollutants in his own body.³⁴

However, some scholarship in contemporary poetry, ecopoetics and poetry of the Anthropocene is bringing together the ‘avant-garde’ with the ‘lyric,’ suggesting that the perceived divide between these two modes needs to be reappraised. The lyric has recently been subjected to extensive and radical alterations, according to poet, editor and critic Fiona Sampson. In contemporary British poetry, she has identified the ‘extended lyric’ of long lines and sequences³⁵ and the ‘exploded lyric’ that inherits ‘radical traditions,’³⁶ also blurring the boundaries between first-person and omniscient narration.³⁷ In ecopoetics, poets Forrest Gander and John Kinsella find that poetry is an inherently human art-form, and the lyric cannot be entirely expurgated from it: ‘the “I” is always hidden away there by varying degrees of separation.’³⁸ Sam Solnick’s monograph analyses the highly experimental Prynne alongside the more traditional Ted Hughes and Derek Mahon (2017); David Farrier’s monograph *Anthropocene Poetics* ranges from the lyrics of Elizabeth Bishop to the highly experimental Christian Bök (2019). Angela Hume and Gillian Osborne’s *Ecopoetics: Essays in the Field* (2018) is deliberately broad-ranging, recognising ‘the range of writing types to which the term “ecopoetics” might be applied’ and invoking ‘a diversity of field-writing practices.’³⁹ This critical reappraisal of the lyric/experimental divide reflects developments in recent ecopoetry from the UK and North America: in Canadian poet Adam Dickinson’s collection *The Polymers* (2013), anthropomorphised plastic molecules are given a speaking voice that is composite and polyphonic. Polymeric structures underpin the composition of many of Dickinson’s poems, prompting Treasa De Loughry to comment that the book ‘refuses... to give primacy to one poetic form.’⁴⁰ When Dickinson examines his own body in *Anatomic* (2019), considering the bacteria that make his life possible and the chemicals that

³⁰ Lynn Keller, *Recomposing Ecopoetics: North American Poetry of the Self-Conscious Anthropocene* (Charlottesville: University of Virginia Press, 2017), p. 19.

³¹ Heather Milne, *Poetry Matters: Neoliberalism, Affect, and the Posthuman in Twenty-First Century North American Feminist Poetics* (Iowa: University of Iowa Press, 2018), p. 5.

³² Milne, p. 97.

³³ Timothy Clark, *The Value of Ecocriticism* (Cambridge: Cambridge University Press, 2019), p. 75.

³⁴ For more information on Bök’s *The Xenotext: Book 1* (2015), see Farrier 2019 pp. 108-23 and John Charles Ryan’s ‘Biological Processes as Writerly? An Ecological Critique of DNA-Based Poetry,’ *Environmental Humanities* 9.1 (2017): 129-48. Adam Dickinson’s *Anatomic* (Toronto: Coach House, 2018) was written in response to microbiome and biomonitoring testing on the author’s own body.

³⁵ Fiona Sampson, *Beyond the Lyric: A Map of Contemporary British Poetry* (London: Chatto, 2012). Kindle, loc 3927.

³⁶ Sampson, loc. 4074.

³⁷ Sampson, loc. 4139.

³⁸ Forrest Gander and John Kinsella, *Redstart: An Ecological Poetics* (Iowa City: University of Iowa Press, 2012), pp. viii.

³⁹ Angela Hume and Gillian Osborne, eds. *Ecopoetics: Essays in the Field* (Iowa City: University of Iowa Press, 2018), p. 5.

⁴⁰ Treasa De Loughry, ‘Polymeric chains and petrolic imaginaries: world literature, plastic, and negative value.’ *Green Letters: Studies in Ecocriticism* (2019) 23.2: 179-193 (p. 182).

leach into his body, he finds that ‘I am a spectacular and horrifying assemblage. I resemble a battery.’⁴¹ If the lyric I is composite and plural in Dickinson’s Anthropocene song of himself, McCarthy Woolf’s lyric I becomes not only allusively intertextual, but ecologically networked and co-constituted by rivers, oceans and other species in *Seasonal Disturbances*.

McCarthy Woolf has commented at length on her own environmental poetics, and on how intertextuality, climate change and ecological relations shape her work. She describes the intertextual poetic forms she has invented⁴² as ‘pushing at the lyric’ while her deployment of Japanese hybrid forms ‘gives a fluidity to the lyric.’⁴³ She expands upon the poetics of climate change in an interview with fellow poet Dominic Bury, commenting that the best climate change poetry needs to be both ‘felt’ and ‘logically structured.’ In her poetic practice, she finds that writing from a place of personal, ecological connection is a productive way for her to consider the universality of climate change: ‘I know I’m better off writing ‘what I know’: e.g. how it feels to go swimming rather than how I’m going to stop the polar ice caps melting’. She states that poetic lacunae and fragmentation are effective formal strategies for poet Safia Elhillo’s evocation of the links between climate change, war and migration, utilising ‘white space as part of a fragmentary process’ – a method that can also be perceived in *Seasonal Disturbances*. Yet if McCarthy Woolf examines broken human and ecological relationships, her book presents relation between species and people as urgently-needed alliances on what Anna Tsing terms a ‘damaged planet.’ Her view is that a shift in human attitudes is needed, towards viewing nature as ‘an interbiotic system to which we contribute and belong.’⁴⁴ The poetic forms and themes in *Seasonal Disturbances* are frequently rhizomatic, intertextual and interconnected. Describing the poetry of Joy Harjo, which forms a ‘golden shovel’ found poem in *Seasonal Disturbances* (p. 48), McCarthy Woolf speaks of forms of ecological relation that are equally present in her own work: ‘If I look out there and there’s a tree, there’s a relationship. All the trees are in relationship with them – they are in relationship with the birds that live in them, and with the squirrels that run beneath them, and that this relationship can be communicative’ (McCarthy Woolf and Reddick, p. 3). *Seasonal Disturbances* presents human speakers and characters as existing in co-constitutive, rhizomatic relationships with nonhuman others, destabilising the concept of a unified lyric self and putting anthropocentrism under pressure.

Seasonal Disturbances contains three main poetic sequences, united by formal and thematic links. Like rhizomes or fibrils, these sequences extend their tendrils throughout the collection, forming (often unexpected) links between poems that initially appear to be unconnected. The first sequence revises the lyric, and ranges from ‘The Hollyhocks’ to ‘Seasonal Disturbances’ and ‘The Island.’ This sequence of reinvented lyric poems draws on ecological insights and deploys rich intertextual allusions. Intertextual forms emphasise the environmental dimensions of poetry by Elizabeth Alexander and Joy Harjo (McCarthy Woolf 2017 pp 28-29, pp. 48), contributing to the author’s project to diversify ecopoetics. By exploring an international, multiracial ecopoetics, she reworks the lyric poem to create a narrative voice that is ecologically relational, trans-Atlantic and polyphonic. The second strand is a sequence described as a ‘disrupted zuihitsu’ (McCarthy Woolf 2017 p. 81). This fragmented narrative meanders throughout the collection, deploying long lines suggestive of the prose poem. Drawing on the shifts between verse and prose in *The Pillow Book* (p. 81) (completed in the year 1002 by Japanese woman courtier Sēi Shonagon), McCarthy Woolf

⁴¹ Adam Dickinson, *Anatomic* (Toronto: Coach House, 2018), p.9.

⁴² The ‘coupling,’ McCarthy Woolf’s formal innovation that combines found prose with intercalated lines by the poet, is discussed shortly in this article.

⁴³ McCarthy Woolf, Karen, interviewee, and Yvonne Reddick, interviewer, ‘Seasonal Disturbances’ *Interdisciplinary Studies in Literature and the Environment* (summer 2020) 29.3: 1-9 (p.4). In press.

⁴⁴ Karen McCarthy Woolf and Dom Bury, ‘Grievous Bodily Harm,’ pp. 22-23.

focuses on Shonagon's depiction of the relations between animals and plants, creating a transnational poetic form that evokes human voyages and nonhuman migration. McCarthy Woolf comments that the *zuihitsu* forms a 'watery backbone' to the collection, and that 'Water and liminality connect my book formally as well as thematically' (McCarthy Woolf and Reddick pp. 4-5). A third sequence in *Seasonal Disturbances* engages more overtly with biological science. This strand is made up of the nine poems in *The Science of Life* series. These poems are comprised of found text from the encyclopedia of the same name by H. G. Wells, Julian Huxley and G. P. Wells, and the poems were also 'written in response to eXXpedition, a transatlantic all-women's sailing mission investigating the impact of microplastic pollution on marine and human life,' in which the author participated (McCarthy Woolf 2017 p. 81). Linked to these forms are the two 'couplings' in the collection. The 'coupling' is a poetic form that McCarthy Woolf pioneered,⁴⁵ and which she describes as 'an interventionist, hybrid form' where 'a passage of pre-existing prose is lineated and a response line that includes assonance, repetition or rhyme is written underneath to create a new lyric narrative'; the first of these responds to a letter by Charles Darwin and a second to Bashō's *The Narrow Road to the Deep North* (McCarthy Woolf 2017 p. 81). This intertextual method not only evokes global relationships between writers, but also invites environmentally aware rereadings of the way Bashō and others present enmeshed relations between humans and other species.

'Pushing at the Lyric': Rhizomes and Inter-Species Relation

Seasonal Disturbances begins with 'The Hollyhocks,' which reads like an Anthropocene detective story. The questions the poem explores – often playfully – include, is anyone innocent of environmental damage? How do apparently personal actions reveal wider political-ecological issues? Unequal gender relations, climate change, the uses of plants and animals, and western society's everyday acts of consumption are considered from an environmental standpoint. A wealthy couple visit a hotel where :

the horse is restless in the stable,
he hasn't been out for days
and when she sees the text

it's like the parcel of cold sky
hanging over fields covered in snow
and studded with blackened Champagne vines.
Then all of a sudden it's – *when you're together*
does she crawl on all fours? What does she drink?
Tell me, I need to know, what does she eat? (McCarthy Woolf 2017 p. 9).

The locked-in horse, the simile of dead vines that evoke climate change, the cheating husband, the 'other woman' crawling on all fours: all are part of an interlinked system of patriarchal control and environmental exploitation. A woman who picks and burns hollyhocks (presumably the wronged wife, although the poet leaves us guessing) provokes a detective investigation; the author humorously suggesting a future age when damaging plants is a criminal offence. Shifts in tone and pronoun proliferate in this poem. They destabilize what appears at first glance to be a third-person narrative, even pushing towards a parody of high-flown ecological lament, complete with Georgian-style capital letters to open each line – 'O hollyhocks of Ile de Ré.../ Grow for me again!' A shift to prose poetry explores gender

⁴⁵ For a detailed discussion of the "coupling" form that McCarthy Woolf has developed, see Karen McCarthy Woolf, interviewee, and Fiona Sampson, interviewer, 'Making a poem the Karen McCarthy Woolf way,' *Msllexia* 64 (Dec/Jan/Feb 2014–15): 49–50.

oppression ('That time her ovary pinged like an elastic band as he stood over her in the kitchen insisting on one-inch cubes for the beef') (p. 10), at once an act of domestic oppression and a small contribution to the meat industry's climate-changing practices. The individual's enmeshment in Earth's vast climate systems is humorously alluded to when the detective 'swigs the rest of the melted ice from his glass' (p. 11). Scientific discourse and the *Oxford English Dictionary* combine in the poem's sixth section:

Alca Rosea, family Malvaceae. ORIGIN: Middle English: from holy + obsolete *hock* 'mallow', of unknown origin. It originally denoted the marsh mallow, which has medicinal uses (hence, perhaps, the use of 'holy'); (McCarthy Woolf 2017 p. 10).

The marshy natural habitat of these plants, too, is redolent of landscapes menaced by climate change, since McCarthy Woolf has mentioned 'boardwalks across the marshes' (p. 9). Whether the French marshes of Ile de Ré or the boardwalks of the Thames estuary, all may be menaced by encroaching waves. Climate change hovers like a spectre over the entirety of the poem-sequence 'The Hollyhocks,' and it is presented as permeating the air and water. The darker side of ecological relation is that small acts of environmental damage may have far-reaching consequences for Earth's organic and inorganic systems. Shifting between prose poetry and lineated verse, the poem's formal fluidity also dramatises breakdowns in narrative that hint at climate breakdown, fractures in the characters' romantic relationships, and the destruction of plant life. However, unexpected forms of connection and relation emerge. 'A skeleton leaf tattooed around a scar' (p. 9) is the single line that makes up the poem's resonant fifth section, suggesting that shared human and nonhuman suffering might lead to healing. Here is the 'scar tissue' that McCarthy Woolf associates with the Anthropocene (McCarthy Woolf and Reddick p. 6), but is not without the possibility of regeneration. The poet ends the poem on the resonant pun 'leaves.' McCarthy Woolf's poetics of relation depicts an intricate network of connections, where broken human relations give way to unexpected inter-species alliances. After all, mallows produce rhizomes.

The collection is redolent of what McCarthy Woolf calls 'interbiotic' relations; she deploys the lyric to show animals, plants and humans in profound enmeshment. Such meshes are often found in the unexpected setting of modern London. If birds provided elegiac imagery in McCarthy Woolf's *An Aviary of Small Birds, Seasonal Disturbances* presents them as adaptable, urban survivors more often than victims of human actions. In 'Up on the Hill,' a character sketch of a place with its people and animals, spring arrives unusually early due to climate change – but the birds are nevertheless adapting to human technologies in unexpected ways:

the wrens
are nocturnal now, in order that
their song might be heard over
the babble of traffic (p. 14).

Avian adaptation also features in the short lyric 'Gulls', set in the Canary Islands. If the later poem 'Kingfisher' presents a young bird as a casualty of climate change, the gulls are depicted as resilient survivor-scavengers:

Inland, at the vast
malodorous tip
thousands wheel above red
earth, wings cast

to the putrid scraps
on which they must feed (p. 17).

The poem evokes bird migrations and human voyages, the pathos of a ruined landscape, but also the gulls' tenacious ability to survive and capitalise on polluting rubbish: in spite of damaged ecosystems, unexpected links and alliances emerge. The setting of Arrecife (a port formerly involved in the notorious 'triangular trade' in human beings) subtly suggests issues relating to the Black Diaspora, but identity and race are not the poem's main focus. Formally, this fourteen-line poem resembles a relaxed sonnet, yet half-rhymes so subtle one might blink and miss them suggest a sense of knotty relation and near-disconnect. In the Anthropocene, places, people and creatures join or become disjointed; human and nonhuman connect in unexpected ways.

'Seasonal Disturbances' already draws readerly attention, as the title poem of the collection – and the poem's first line deploys surprise tactics to bring the reader up short: 'On the night of the hurricane/ I slept right through it.' This poem evokes a London imperilled by advanced climate change, where hurricanes (more familiar from poetry set in the Caribbean, such as Walcott's *Omeros*) cross the Atlantic. An 'ovenish' wind (an eye-catching coinage entirely apt for this urban setting) and 'unseasonably/ warm' weather makes the vast problem of climate breakdown as personal and intimate as possible. The speaker experiences racism ('everyone else was white/ and the two typesetters I managed always/ queried my edits'), and the poem explores both human interference in climatic processes and migration: 'I could see trees blown over/ their roots curling up into the air' (p. 61). 'Roots' are an image rich in meaning for writers and theorists of the Black Diaspora. Paul Gilroy argued in his seminal study *The Black Atlantic* that people of African descent must move fluidly between 'roots' and 'routes' – between Africentric 'roots' and Eurocentric migration.⁴⁶ McCarthy Woolf's title poem draws out the ecological dimensions of both roots and routes.

The Science of Life and the Life of Anthropocene Science

If the concept of the Anthropocene was initially criticised for being male-dominated and white-dominated,⁴⁷ McCarthy Woolf's long sequence *The Science of Life* playfully subverts these biases. The scientific establishment was the exclusive preserve of men for many centuries (Merchant 1980, Haraway 1991), and *The Science of Life* examines its gendered and racial biases in detail. The author's participation in the women's research voyage eXXpedition, which seeks to monitor the impacts of plastic pollution on the oceans, is a direct intervention that also counteracts such biases. McCarthy Woolf describes *The Science of Life* as a 'found-sonnet sequence' taken from 'the encyclopaedia of the same name by H. G. Wells, Julian Huxley and G. P. Wells' (2017, p. 81). She elaborates on her use of the encyclopaedia, and the tension between its prescient environmental ideas and its backward racism: 'it was written in 1929, and in some ways it's ecologically very forward-thinking – but at the same time there's this really dodgy eugenics science, because people were obsessed with overpopulation' (McCarthy Woolf and Reddick p. 5). The third poem in the collection, 'The Science of Life 492,' takes aim at Hooker and Wells's eugenics and their criticisms of overpopulation, while examining the ecological issues with which they engage. The poem criticises 'innumerable plump and hideous/ landfolk' who are 'rich' (p. 13) – implying that wealthy consumers are more culpable for extinction, climate change and pressure on natural resources than voyagers or migrants who are not 'landfolk.' Their encyclopaedia is reshaped

⁴⁶ Paul Gilroy, *The Black Atlantic: Modernity and Double Consciousness* (London: Verso, 2002 [1993]), p. 190.

⁴⁷ See Kate Raworth, Donna Haraway 2016, and Karen Yusoff 2018.

and repurposed for our current age of extinction:

no birds nesting or singing in the trees;
no bellowing, roaring or squeaking savage or small;
no caterpillars to eat the leaves; no bees
or butterflies; no creatures that do more than crawl.

The poem exposes broken relations with nonhuman others, and the full rhymes add a nursery-rhyme tone that lends satirical bite. The racist and speciesist connotations of ‘savage’ are interrogated and reformulated. The ode, too, is open to parody and subversion, sampling and fragmenting the discourse of white male scientists in order to subvert it:

*An Ode

	Another
spasm	was being prepared
	and the climate
began	to change. (McCarthy Woolf 2017 p. 13).

Huxley, Wells and Wells’ text is subjected to outright breakdown, a formal technique that can be read as mirroring climate breakdown and broken webs of life. *The Science of Life* encyclopaedia was written far earlier than major thresholds in scientific awareness of climate change,⁴⁸ and McCarthy Woolf’s ironic ode deploys formal techniques such as decoupage, breaking and remodelling the sonnet form for an age that urgently demands engagement with the climate crisis. The lacunae in this poem evoke the difficulty of narrating climate change, the white space on the page echoing with what often remains unsaid in both everyday conversations and political discourse. If scholars such as Ghosh and Clark have found that climate change is notoriously difficult to represent in literary fiction, poetry offers the formal flexibility to attempt to grapple with this (often unspeakable) topic.

‘Horse Chestnut I – A Coupling’ subverts a letter of 1860 that Charles Darwin wrote to J. D. Hooker. Humorous and wry, this ‘coupling’ says as much about gender and sexuality as it does about pollination. Its flourishing sensuality is a humorous affront to Victorian attitudes:

So that on all my trees
these trees, my roots, these roots attest

there has been a gigantic crop of quite useless
ideas. & O, how intoxicating the air, as

male flowers, with millions of pollen-grains wasted,
open, as the male, he flowers, swollen and unsated

for there is not a female flower nearly open. –
For there is not a female or a flower so open. (p. 46).

Darwin’s original phrase ‘a gigantic crop of quite useless male flowers’ is subverted to ‘useless/ *ideas*’ – the implication being that the patriarchal, western-centred ideas of Victorian male biologists also had their useless aspects. ‘Roots’ suggest the African ‘roots’ of

⁴⁸An increase in atmospheric carbon dioxide was identified in Charles D. Keeling, ‘The Concentration and Isotopic Abundances of Carbon Dioxide in the Atmosphere,’ *Tellus* 12.2 (May 1960): 200-03. President Lyndon B. Johnson received a report suggesting that this increase was human caused in 1965. See President’s Science Advisory Panel, ‘Restoring the Quality of Our Environment: Report of the Environmental Pollution Panel, President’s Science Advisory Panel,’ November 1965.

the Black Diaspora, but also Glissant's intricate, rhizomatic concept of relation, which can be extended to encompass humans and nonhumans alike. This series of interventionist poems pulls the beards of Darwin and Hooker, Huxley and the Wellses – and by extension, the masculinist and white-dominated history of western science itself.

The second 'coupling' in the collection revisits the horse chestnut tree, a further rooty, rhizomatic link that unites the collection. This 'coupling' responds to *The Narrow Road to the Deep North*:

Horse Chestnut II – A Coupling

from MATSUO BASHŌ, *The Narrow Road to the Deep North*

'There was a huge chestnut tree
once there was a large horse chestnut

on the outskirts of this post town,
on the border of my home

and a priest walking in seclusion
always when I was alone and sometimes

under its shade. When I stood here
looking up into the light

in front of the tree, I felt as if I were
a viridescent umbrella, I felt as if I were

in the midst of the deep mountains
in the arms of a man, my love, who lived

where the poet Saigyō had picked nuts,
to please me.

I took a piece of paper from
I tore a piece of paper from

my bag, and wrote as follows:
my book

'The chestnut is a holy tree,
'A holy tree is the chestnut

for the Chinese ideograph for chestnut,
its seed scattered and brown

is Tree placed directly below West,
is all one could ever hope for in

the direction of the Holy Land.
A tree reaching up to the sun!

The priest Gyōki is said to have used it
– every day, as I gazed into its canopy,

for his walking stick
for protection

and the chief support of his house.’
My support. (McCarthy Woolf 2017 pp. 76-77).

McCarthy Woolf’s concept of inter-species relation becomes global in this poem. A dialogue between poets ancient and modern, western and eastern, centres upon the tree, much as the rhizomatic structure of *Seasonal Disturbances* is undergirded by the branches of the two chestnut trees that feature in the ‘couplings.’ Roots offer relation and kinship between both poets and the arboreal. The scattered brown seed alludes to the origins of the word ‘diaspora,’ which connotes the spreading of seed (*OED*). If the earlier ‘coupling’ responding to Darwin takes a more parodic and combative tone, this ‘coupling’ evokes harmonious relation via repetition and verbal echoes. The symmetrical reflections of ‘I took a piece of paper from/ *I tore a piece of paper from*’ and ‘The chestnut is a holy tree,/ *A holy tree is the chestnut*’ link the globe’s western and eastern hemispheres, drawing attention to the materiality of the written page and to the cultural importance of the tree from which it is created. (There is also a verbal echo of the ‘holy’ hollyhocks that began the collection – a rhizomatic link between people and plants, and between plant-poems in the collection.) The chestnut as lover, as ‘my support,’ suggests forms of mutual reliance and affection between species, an enmeshed network of relations that is at once personal and global.

A ‘Holistic Ecology of Water’

McCarthy Woolf’s long sequence ‘On the Thames’ flows through the entire book. Comprising twenty-one out of the book’s sixty poems, the poet highlights this episodic sequence in a way that mimics the Thames’s centrality to London and its importance as an artery of global migration and mobility. Deploying large lacunae, and the long, meandering, prose-like lines characteristic of the *zuihitsu*, the sequence draws readerly attention via its visual contrast with the more formally tight and structured poems. The poem was written while the author was ‘physically lying on a barge in the middle of the Thames,’ where she was ‘always moving’ (McCarthy Woolf and Reddick, p. 5). The sequence forms the collection’s ‘watery spine’ (McCarthy Woolf and Reddick, p. 4), a fluvial link that evokes relations between boat-dwellers and birds, climate change and tides, humans and the moon.

‘Conversation, with Water’ begins with the sensation of lying on the floor of the wheelhouse, which ‘sensitises the body/ to movement and sound’ (McCarthy Woolf 2017 p.12), suggesting a deep connection to water (which can comprise up to 70% of the human body). Sei Shōnagon’s *The Pillow Book* is quoted and reinterpreted for our age of climate change:

I open *The Pillow Book* on p. 23 to [22] *list of dispiriting things: a dog howling in the middle of the day. The sight in spring of a trap for catching winter fish. Robes in the plum/pink combination when it’s now the third or fourth month...* (p. 21).

Here, the ethically challenged relations between humans and nonhumans are examined – a howling dog might be evidence of loneliness or abuse, while out of season fish traps and plum-blossom robes sound an ominous note after McCarthy Woolf has mentioned the untimely emergence of spring flowers in ‘Up on the Hill’ (p. 14). Voyaging on the Thames is an important trope for authors of the Black Diaspora, writing in Britain. Such accounts range from Olaudah Equiano’s narrative of being pushed into the river to Fred D’Aguiar’s poetry collection *British Subjects* (1993) and Caryl Phillips’s 2012 film and 2013 essay⁴⁹ exploring

⁴⁹ Caryl Phillips, ‘A Bend in the River’, in *A London Address: The Artangel Essays*, ed. by Granta Books (London: Granta, 2013), pp. 75-81.

the Thames through the lens of diversity and the experiences of the *Windrush* generation. McCarthy Woolf's work builds on these antecedents through ecologically aware re-interpretations of diasporan voyages, and an open-ended, relational depiction of the human subject. Glissant's traumatic 'fibril' of the trans-Atlantic slave trade is reworked into a more healing, generative form of relation: an umbilical or filial connection between women and water. Lines such as 'The pull of the tide is the pull of the moon' (p. 21) and 'I think of you, Dear River, as female' (p. 44) create multiple scales of relation between human beings and far vaster systems, from solar system to river-system. McCarthy Woolf explores the concept of relating to water in the Anthropocene as familial:

*The closest is lying with my head in my mother's lap,
the thickness of the paint, bottle green and grey –*

Here is an example of Haraway's 'making kin' in the Anthropocene: river, barge and speaker united by an umbilical family bond. Yet this section of the poem quickly interrogates the possible anthropocentrism of such images: 'In reality I give thanks for the barrier, your reinforced banks' (McCarthy Woolf 2017, p. 42). In spite of its awareness of the kinship between speaker and river, the sequence is always cognisant of human impacts on the environment: the Thames barrier now defends the city against the rising seas of climate change, while extreme weather threatens to cause flooding from upstream. This fluid reshaping of the lyric is at times wryly lacking in a stable narrative voice: 'I confess must be nautical in origin' (p. 27). The lacuna allows the reader to fill in the gaps for herself: here is a human presence that is liquid and unfixed, adding a 'fluidity to the lyric' (McCarthy Woolf and Reddick p.4). Expansive, horizontal lines create a visual suggestion of lapping water. They evoke ecological forms of enmeshment and relation, offering a specifically aquatic and fluvial perspective on Glissant's idea of relation. 'Conversation, with Water' strikes a balance between demonstrating the closeness of relations between humans and nonhumans, human dependence on rivers and oceans, and an awareness that they are suffering from artificial impacts – which in turn threaten humans themselves.

Conclusion

McCarthy Woolf's work joins the current renaissance of ecopoetry from the UK and beyond, and the forms of relation considered in *Seasonal Disturbances* include profound, symbiotic linkages: river as mother, man as tree, arboreal roots, routes and seeds of the Black Diaspora. The book suggests ways of expanding Glissant's fibrillar, rhizomatic concept of relation to include a closer focus on connections between nonhumans and humans; this is played out poetically via formal and thematic links between poems and poem-sequences. Intertextual allusions draw out the ecological dimensions of African American, Native American and Japanese texts, while parodying and challenging Eurocentric, patriarchal science. McCarthy Woolf's poetry suggests an idea of the Anthropocene that is cognisant of the interconnected artificial and natural meshes and networks that hold London in relation to the rest of what Anna Tsing calls our 'damaged planet.' If Haraway's concept of the 'Chthulucene' focuses largely on the rooty and the tentacular, McCarthy Woolf's Anthropocene poetics of relation is equally cognisant of fluvial, oceanic and climatic networks. Her reinvention of the lyric poem, her interventionist writing about scientific discourse and her fluvial poetics of relation develop an 'interbiotic' picture of London where inter-species alliances arise in spite of environmental degradation. Poetry cannot save the Earth, but the multi-species relation evoked in McCarthy Woolf's Anthropocene poetry constitutes what she terms an 'activism of

the heart' (McCarthy Woolf and Reddick, p. 3) that creates ethical and affective links between self and Other, human and nonhuman.

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