# 4 The Challenge for Prose Narrative

Ecocriticism has become a leading forum for thought on the nature and limits of the novel as a literary form. Issues gathered under various concepts of an Anthropocene have raised fundamental questions, such as the nature and limits of narrative *per se*; the nature of realism; the philosophical, cultural and political presuppositions governing conventions of characterisation; cultural assumptions about what makes something a 'serious' or 'literary' work as opposed to kinds of 'mere' genre fiction (science fiction, the fantastic, etc.); and the erosion of meaningful distinctions between the modern Western novel and postcolonial fictions.

The novel has long seemed especially suited to the way environmental issues are always and immediately also issues of politics and culture. A novel in particular has the power to be comprehensive in the way that, say, a paper in a scientific or social science journal never could be: for it is free to trace all imaginable scenarios and to survey how prejudice, personal background, cultural assumptions, scientific research and the complacencies of day-to-day life *all* form part of how people engage or evade environmental questions. Naomi Oreskes is a member of the Anthropocene Working Group, and signatory to its scientific work. Her unrestricted thought on its implications, however, takes the form of a dystopian novel, *The Collapse of Western Civilization*, co-written with Erik Conway, a work of speculative realism in which a future historian is depicted looking back on a story of collapse from near our own time.

This is the idea of literature as public witness, and, often, as the making relevant or translation of scientific data and abstractions into sensuous representation and personal narratives. Barbara Kingsolver's *Flight Behaviour* (2012)[1] has quickly become one of

the best known 'climate change' ('cli-fi') novels for doing precisely that, dramatising the various facets, emotional, ecological, economic and religious of this creeping disaster through the various mixed and clashing responses to it in one location (impoverished rural Tennessee) of a variety of characters, such as local farmers, visiting scientists and television journalists. The drama is made more pointed by the fact that the climate-related phenomenon Kingsolver imagines is superficially an attractive one, the unusual settling for the winter of a large flock of migratory monarch butterflies in a high wood in the Appalachians, where they may well not survive. Although I have criticised aspects of this novel elsewhere,[2] its dramatisation of plural responses to this event illustrates how the novel as a form can seem ideally placed to engage the very mixed up nature of the Anthropocene, its blend of fact and value, politics and climatology, emotional denial and habit, the interplay of global and local scales.

Erin James develops an analogous defence of the novel form in her *The Storyworld Accord* (2015).[3] She celebrates the power of novels to immerse readers in local environments and modes of perceiving them. Her argument hinges on the way narratives are most 'immersive' when they successfully project the spatial and cultural as felt on the human scale. Distant or foreign contexts become available to a reader on the scale at which we live from day to day. She offers readings of Sam Selvon (on social tensions in Trinidad during the Second World War and the life of Caribbean immigrants in 1950s London); Ken Saro-Wiwa on the oil industry and corruption in the Niger Delta; Ben Okri's work on that same country, and V. S. Naipaul's Indian travelogues.

The stronger our sense of immersion in a narrative, of human empathy with the action and characters, then the more likely it is to enhance our understanding of how others think. James writes:

I argue that narratives are the only texts that can provide us with cognitive and emotional access to people's conception and experiences of their ecological homes. Furthermore, such readings

of texts stand to broaden our understanding of the various ways in which people experience and live in the world. (39)

James is only making explicit an understanding of the value of the novel form widespread in ecocriticism. For instance, Lawrence Buell reads Linda Hogan's *Power* (1998)[4] through just such an aesthetic or ethic of personal identification. In this Native American novel, a sixteen-year-old member of the Taiga Tribe, Omishto, witnesses a woman she calls her 'aunt' kill a Florida panther, an animal considered to be a sacred ancestor, as well as being a legally protected species. The killing is done for obscure but sincere reasons at a time of cultural breakdown for this people – maybe better this deliberate, reverential killing than the usual local extinction due to roads, housing and pollution. 'Aunt' Ama Eaton is taken to a US court for the killing, but finally acquitted for lack of evidence. A native tribunal, however, does convict her and she is banished. Yet Hogan's text presents both these judicial procedures as too crude for the nuances of this specific case. For Buell, this makes Hogan's novel a critique of the formulaic nature of the law as such, as if environmental ethics could have the rigidity of a mere code to be obeyed or transgressed: 'Justice is unachievable because both mainstream and native cultures are entangled in their own protocols.' Neither the colonisers' law nor the old tribal law is adequate to the new environmental context,[5] and only the kind of immersive truth undergone by the novel's reader is sensitive enough to acknowledge and make understood Ama's felt need to kill the panther. In effect, for Buell the novel form itself is the bearer of modes of tragic recognition and understanding that elude legal and ethical codification.

At the same time, James's very defence of features that make a narrative immediate also, unwittingly, suggests possible limitations and questions when it comes to engaging environmental issues on a global scale, or which may not be visible locally, such as climate change. The global context is now one of variously dangerous environmental tipping points, but in which changes are happening at scales that we do not perceive with ordinary human

faculties, and with a complexity that may escape us, though we cannot escape it. This is a world whose 'unconformities' in a broad material sense may well elude the novel understood as a form which privileges the realm of personal human experience as the basic reality.

This question of the limits of the novelistic and of the 'normal' human scale has become a feature of critical debate in the Anthropocene, variously conceived. James also does not take up the challenge of the most powerful and controversial forms of 'immersive' prose, that in which the attempted viewpoint is that of a non-human animal, as with Virginia Woolf's *Flush: A Biography* (1933) (the name of the pet dog of Elizabeth Barrett Browning)[6] or Barbara Gowdy's *The White Bone* (2000),[7] which recreates from 'within' the social, intellectual and spiritual worlds of persecuted African elephants.

Non-human subjectivity and its narrative recreation is now a diverse and fast-growing area of debate in critical animal studies, though it can only be outlined here. The key question is what kinds of worlds do non-human animals possess? And how might non-human subjectivity be justly represented in language? Such inter-species translation forms a challenge for language and semantics every bit as daunting as that Macfarlane poses in suggesting a new vocabulary of the Anthropocene. Gowdy's *The White Bone* for instance, risks translating into human speech a repertoire of elephant vocalisations and signals. In such representations, anthropomorphism becomes a helpful but unstable trope, ascribing as it does to some non-humans the human-equivalent dignity of full consciousness, emotion and even personhood, but doing so at the risk of obliterating the singularity of very different modes of life and communication.[8] How far does ascribing a linear narrative consciousness to a non-human already anthropomorphise it?

Thomas Van Dooren's *Flight Ways: Life and Loss at the Edge of Extinction* (2014),[9] is a recent nonfictional contribution to critical animal studies, explicating in depth the specific modes of life ('flight ways') of species of birds on the edge of extinction, such as the Hawaiian crow, or the Laysan and Black-footed albatrosses. In these

**IMAGE 4** *Chimp 'smiling'?* Close-up of mixed-breed monkey between chimpanzee and bonobo smiling, 8 years old, Eric Isselee/Shutterstock.com.

exercises, the immersive power of narrative takes us to the very frontiers of modes of life conceivable to a human being, as well as forming a voice of horrified protest against extermination.

### THE ANTHROPOCENE AND QUESTIONS OF NARRATIVE

Narrative and narrating are, for human beings, fundamental for making sense of the world and feeling able to act in it. Humans crave to understand things by embedding them in some linear story – it is a kind of 'mental lust' (H. Porter Abbot).[10] Even scientists need to narrate, 'to integrate their observations into origin stories' (Lynn Margulis).[11] More problematically, people resort, especially in times

of stress, to narratives ascribing the cause of things to some control-ling entity or scapegoat – for example, the economy falters, they blame the government or immigration. Such default modes of narrative explanation are good for political activism and campaigning, but not so good for intelligent analysis.

Is the so-called Anthropocene, with all its complexities, anti-pathetic to narrative as a basic mode of sense making, not something adequately presentable in terms of a linear and coherent chain of dir-ectly related events? If so, then this would matter greatly in relation to our ability to comprehend it or make it the concern of imaginative literature.

The narratologist H. Porter Abbot summarises the kinds of phenomena that most resist the human need for some 'story' as a form of intellectual explanation:

One is the massive distribution of causal agents such that there is 'action' but not a 'chain of events'. The other is the radical narrative disconnect between local action and the product (the object or arc of change) brought about by emergent behavior.[12]

Abbot's account would fit easily the almost bewildering multipli-city of factors behind global environmental degradation. At issue are capitalist economics, growing population pressure, tropical defor-estation, impoverishment, neo-colonialism, alongside such material factors such as levels of methane from thawing tundra in Siberia, rates of soil degradation in Africa, the varying reflectivity of clouds, as well as environmentally dubious cultural norms, such as those of patriarchy, and anthropocentric fantasies of control and sovereignty. Together, these and other phenomena create an obscure whole of fur-ther side effects, alarming and only partially intelligible, as known and unknown non-human agencies interact in badly understood ways with increasingly obtrusive human actions. Environmental degrad-ation may become less a matter of even discernibly plural causes, and more the emergent effect of the combination of numerous interacting issues of a hybrid kind. Along with the difficulty of conceiving issues

on a planetary scale over longer timescales, complexity itself seems set to become an underlying environmental meta-problem.

If all these together are being given the name 'Anthropocene' as a sort of shorthand, then it serves as a paradigmatic example of a so-called *emergent* phenomenon, that is, something not predictable from its antecedent conditions.[13]

It is a matter again of scale and scalar literacy. A supremely important task for modern literature and for criticism becomes for them to find ways of representing this new reality of elusive agencies and distant or invisible wrongs, happening at counter-intuitive scales, and to do so in ways that are engaging, credible and pertinent. A crucial claim of green criticism, after all, has always been that the environmental crisis is a crisis of imagination, that new ways of imagining and conceiving humanity's relation to the natural world are needed, and that literature, art and criticism can be at the vanguard of this.

For novels that engage issues on a global scale, such as climate change, this means finding answers to a well-known argument by Dominic Head as to why the novel as a form may be inadequate for much environmental work. In Roman Bartosch's words: 'Character, person, and narrative consciousness, all of which Head cites as the said basic foci of fictional writing, may not be adequate means of dealing with the larger-than-individual process of evolution, or the vastness of the biotic community.'[14]

A novel which takes up these challenges is T. C. Boyle's *A Friend of the Earth* (2000).[15] Boyle's narrative strategy is to offer two, alternating storylines focused on an environmental activist called Ty Tierwater, with scenes from his life as a young man (narrated in the third person) and as an old man (in the first person), in narratives set in 1989–93 and in the 2020s, respectively. This double time frame, dramatising very different environmental contexts, also helps fore-ground distinctions between the demands being placed on earlier, first generation and on contemporary ecocriticism, for the later con-text is that of a world ecology ruined by climate change.

In the 1980s Tierwater is a committed member of EF ('Earth Forever'), a fictional version of the pseudo-anarchist group Earth First!,

with its programme of 'direct action' and the 'monkey wrenching' of Abbey's seminal *The Monkey Wrench Gang*. The reader follows the drama and bravery of eco-saboteurs working to save indigenous forests from logging. Boyle does not simplify the issues: sympathy is shown for those who need to support themselves by working for forestry companies, or who depend indirectly on the incomes they generate. Tierwater's old companions included one Alice Wind, a woman who embarrasses him by conforming too closely to the tree-hugging stereotype with her vacuous green rhetoric. The reactions in the 1980s narrative to Tierwater's activities from normal people, such as police officers and local forest and retail workers, are precisely those heard again and again in environmental controversies ('but it's about jobs', 'these activists would damage the economy', etc.).

The gap between the two narratives is the technique by which Boyle makes legible the issue of that encompassing context many would now call the 'Anthropocene' – an obscure hybrid monster composed of capricious shifts in the working of the Earth system, interacting with the impacts of vast human populations and rampant capitalism ('the whole world's a comic strip now' (2)). At the same time, as we shall see, Boyle's use of a two-narrative technique has its own elements of evasion and simplification. In 2025 (world population eleven and a half billion (15)), Tierwater is a bitter old man, the veteran of several prison terms. Everywhere houses are ruined, windows bricked up to protect against the storms, etc. The effect of the gap between the alternating narratives is to highlight the discrepancy between old-fashioned local environment activisms, even the most extreme monkey-wrenching kind, and the overwhelmingly global scale of the issue. In 2025, one huge storm can destroy forests Tierwater once strove to save piecemeal. Tierwater's job is now to look after a few remaining species of charismatic large animals preserved in the grounds of a rich rock star.

The contrast between the two narrative times seems both to justify the younger Tierwater's acts of sabotaging Caterpillar trucks and road-blocking, and yet to make them appear almost farcically insignificant. It shows, in Adam Trexler's words, how difficult it is to oppose climate change, with no visible human protagonist to fight

against – where do you go to confront it in some way that doesn't immediately become more gesture than effective action?[16]

Tierwater's is a recognisably American form of environmental protest, looking to a tradition of civil disobedience articulated by Henry D. Thoreau and with an intensely individualist ethic that echoes the eighteenth-century political philosophy of Thomas Jefferson's Declaration of Independence:

Maybe he was thinking of Thoreau, his hero of the moment (along with Messrs. [John] Muir, [Aldo] Leopold and Abbey): *The authority of government can have no pure right over my person and property but what I concede to it*. Yes. Sure. Sure, he was. (49)

The audience for such a protest is, superficially, the loggers and logging companies, but it is more truly the public who follow the news on television or who read newspapers and who in the end, it is supposed, constitute that element of public opinion from which governments arise and which alone grants them legitimacy. This is also, of course, the basic faith of ecocriticism, that intellectual advocacy of the environment can so alter the 'cultural imaginary' as to have real, political consequences. Hence, some of Tierwater's demonstrations are clearly publicity stunts for a cause, as when Tierwater and his partner Andrea spend a month naked in the forest living only on food they can procure there for themselves, or Tierwater's daughter Sierra's protest vigil at the top of a tree.

Boyle's novel is particularly interesting because it juxtaposes a world ravaged by global warming with the kinds of local environmental actions and arguments that were the context and overriding concern of ecocriticism as it emerged in the 1990s. The effect is paradoxical and perplexing. In the earlier narrative, there are clear objectives and issues, saving the old growth forest and its species, and also clear antagonists, the bosses of logging companies and the government that supports them. While waiting for help to release him from the increasingly painful concrete in which he has set his feet to block a logging road, Tierwater tries to read Bill McKibben's classic *The*

*End of Nature*, published that year, 1989 (33).[17] The protest demo also embodies a residual faith in democratic institutions and the power of public opinion, the faith that theatrical kinds of protest can appeal to the thinking of sufficient numbers of people to affect government and business. But 'if a protest falls in the woods and there's no one there to hear it, does it make a sound?' (35) and, in fact, the protest is effectively wasted since 'there wasn't a single reporter on hand to bear witness' (35).

In the later narrative, on the other hand, there is no environmental activism beyond protecting animals from a devastating storm. There is no forest to be 'saved' or visible human antagonist to engage:

But what has changed, and no amount of footage on the nightly news could have prepared us for it, is the forest. It's gone. Or not gone, exactly, but fallen – all of it, trees atop tree, trees bent at the elbows, snapped at the base, uprooted and flung a hundred yards by the violence of the winds. (266)

The physical, social and institutional context that gave meaning to the older forms of environmental protest are all obsolete or absent. The institutionalised environmentalism once tried by Andrea (in a public pressure group complete with glossy publications and merchandise) is also irrelevant. The double-narrative technique instantiates, without resolution, the dislocations of scale that characterise environmental thought and action in the Anthropocene. Boyle achieves this without any deviation from the conventions of classic realism in narrative or characterisation.

Boyle's technique enacts a kind of post-human shift, with the sense of individual agents as in fact the puppets of a situation or context they did not fully grasp. As a result, conventional generic expectations in the earlier, monkey-wrenching narrative seem in part thwarted or hollowed out, as the events described hover in weird tonal areas between individual heroism, destructive male grandstanding, and farcical comedy. Boyle's characterisation of Tierwater becomes a critique of tendencies within the kind of direct

action activism celebrated by Abbey or Earth First! For Tierwater's acts of destruction, having no significant effect, become successively more extreme, such as his trying to burn down a 35,000-acre forestry stand, or to topple electrical towers. His acts seem more and more motivated by social hatred, of politicians and big business, than by environmental ethics. Boyle also lets the reader see Tierwater's own implication in the very set-ups he wishes to destroy. His income comes from shopping centres inherited from his father. Between bouts of activism or prison, he lives a lifestyle of expensive cars. He even calls himself a 'criminal' ('just like you' – the reader), living 'in the suburbs in a three-thousand-square-foot house' (42) and, like the ecologist Aldo Leopold, knowing that even his precious nature trips rely on unsustainable forms of modern transport infrastructure and manufacture.[18]

Trexler reads the novel as dramatising a sense of the futility of earlier style environmental activism in a world in which increasingly 'no pinpointed conservation is possible: a forest is destroyed in a single storm' (144), and in which 'the tactics to preserve individual species and places are miscalibrated to the challenge of climate change' (143–4). For Trexler this highlights an enormous challenge to the form of the novel itself, with the realisation that 'the familiar structure of human conflict [in novels] – national, social and political – cannot wholly imagine our future climate' (144). Boyle's focus, characteristic of the realist novel, on the personality, emotions and desperation of one, male environmentalist risks being a reductive scale-framing of complex environmental issues, making them into matters of the strengths, weaknesses or integrity of the individual personality.

However, Trexler's conclusion about the futility of conventional conservation is surely conceding too much to a dubious element in Boyle's double-narrative technique. The near-future devastations of global warming are dramatised by Boyle with a vehemence such as to produce what is surely an excessive sense of fatalism, that *all* the kinds of activism engaged by Tierwater and Andrea were futile. In fact, the world of the 2020s seems set to be one poised *between* the projections of Boyle's two narratives: that is, a sense of possible

and meaningful engagement in individual activism remains, including work in ecocriticism, but it is being increasingly undercut not just by a sense of its own moral limits, but by a context whose scale, complexity, and unpredictability threaten slowly to turn it into empty theatre.

The novel ends peculiarly, with Tierwater and Andrea settling amid a devastated suburbia landscape into a slightly cosy, reduced parody of life before ('with the shoots of the new trees rising up out of the graveyard of the old' (274)), and the birds: 'they're still out there, they're still alive, some of them anyway' (273). The closing scene ends on a knowing fiction in which 'Petunia', the Patagonian fox, sole survivor of the rock star's menagerie, is introduced to a neighbour as simply a breed of dog:

Andrea's giving her world-class smile. 'We're the Tierwaters', she says. 'I'm Andrea, this is Ty.'

The girl just nods. She's looking at Petunia now, the smallest frown bunched around her lips. 'Isn't that a, what do you call them, an Afghan?'

'That's right', I say, 'that's right, she's a dog'. And then, for no reason I can think of, I can't help adding, 'And I'm a human being.'

The novel ends on this odd note of seeming humanist cosiness. But the one statement being an untruth – 'she's a dog'– also slightly skews the other, 'And I'm a human being.' Is there an implicit acknowledgement that such a statement can no longer mean here what it may have done in the past, and that the cosiness is a deceptive performance?

A climate change novel nearly contemporary with Boyle's also uses the technique of alternating narratives in different time frames, but does so in ways as if to highlight the very inadequacy of representation to reality that troubles Trexler. In Will Self's *The Book of Dave* (2006)[19] two parallel alternating plots are set about five hundred years apart, seemingly quite unconnected to each other. There is a future drowned London, an archipelago of islands covered with flimsy huts, while the present-day narrative consists of the misogynist rantings

of one Dave Rudman, a London taxi driver, bitter about his divorce and limited access to his son. He writes down angrily on metal all his opinions about women and the authorities who license taxis, and he later buries this text, not knowing that, by mere chance, it will be dug up in the distant future and taken as a religious document (or the Davine word). This 'Book of Dave' then becomes the basis for a viciously patriarchal neo-feudal society in the British archipelago where the ruling priest is called 'the supreme driver' (this in a world with no cars) and everyone tries to speak a kind of sanctioned mockney slang. For instance, people don't greet each other with 'hello' but with 'Where to guv': 'screen' is the word for sky, 'headlight' the word for the moon, 'dashboard' for the milky way, 'a fare' is a human soul, 'curry' is the generic word for food, an 'opare' means an unmarried woman. So, there is no moralising about climate change, nor even an expressed awareness of it in any character, nor is it even a foreground topic. The bleak but apt comedy lies in the unseen absurdity of the connection between past and present, the complete lack of proportion between act and unthought consequence. Strong lines of connection are being suggested between future global warming and present misogyny, and with the fantasies of control implicit in car-driving, but not so as to form explicit or more than blurred narrative links. In Self's novel, the disjunctions in Boyle between Tierwater's life as an environmentalist in the 1980s and the chaos of the world in 2025 are taken to an extreme of absurdity in the disconnection between cause and effect, the London of the early twenty-first century and the archipelago five hundred years later that knows almost nothing of it. Again, the risk of such a mode of presentation is that the jump between the two narratives, while highlighting the daunting scale and intellectual challenge of global warming, evades the environmental choices of the present, and of possible activism today.

Yet, the impasse made legible in Boyle and Self, and traced in Trexler's broad survey of climate fiction, would not negate the value of work to address specific local forms of environmental violence, such as road-building, misuse of pesticides, chemical pollution or the continuing miseries of environmental injustice and viciously patriarchal values – all of them topics in other novels celebrated by

ecocritics.[20] The impasse does, however, reframe them in ways that qualify their possible impact on the broader scale. Addressing greed and environmental injustice in Brazil may not do anything to, say, reduce carbon emissions in China, even as these may form a greater threat to the Amazon forests. The challenge for environmentalists and ecocriticism becomes to be able to continue locally valuable work even when aware of its weak position on an opaque and dispiriting gameboard at the planetary scale. As Daniel King suggests: 'Certainly, there's not much point formulating a politics if we think we're impotent, so it has to be a politics based on hope, even if that hope doesn't translate into confident expectation.'[21]

## NON-HUMAN AGENCY AND 'PETROFICTION'

Trexler's survey of novels concerned with climate change in some way argues that the scale of the issue must induce new forms of creativity and innovation, developing new modes of representing the obscure agency of non-human things, displacing the currently more 'canonical' attention to the supposed centrality of individual characterisation in a novel, and rejecting plots that turn solely around the familiar individual/society axis, or too narrowly on issues of 'identity' or cultural politics. Trexler is responding to the notion that the Anthropocene should not be understood as something for which the human is sole subject or agent but is rather an *assemblage* of human and non-human factors. He highlights the novel form's ability to stage the central place of landscape, or climate, or infrastructure, or machines or technology, or buildings, as 'formally constructive entities in fiction' (13).

Aspects of such a 'turn to things' were already prominent in accounts of a proposed subgenre of the novel first mooted some three decades ago. 'Petrofiction' is a coinage first used by Amitav Ghosh in a review of 1992,[22] but since widely adapted in the growing field of Petroculture Studies, studies of oil and its profound effects on human life, from the brutal power of the oil industry, to oil's wide but usually unconsidered place as the condition of much of modern life,

the proliferation of private cars for example, or the widespread use of artificial fertilisers in agriculture. Oil is the dominant condition of the 'great acceleration' in world economic growth since 1950, of expanding consumption and population growth, and of suburbanisation based on private property ownership. It is also a decisive factor in wars and international instability. Its extraction and trading have sustained deeply oppressive regimes in Africa and the Middle East. It has widely degraded environments, both immediately in oil spills and in global phenomena such as global warming, the development of pesticides, the plastic infestation of the oceans, and the destructive effects of automobiles. After the Second World War, oil even 'changed what people dressed in, evacuated into, viewed and even ate, not just what they put in their power machinery' (Frederick Buell).[23]

The telling fact for Ghosh was that the ubiquity of oil in modern life was, with rare exceptions, not directly engaged in the modern novel. A significant exception is Upton Sinclair's *Oil* (1927),[24] on the oil boom of southern California in the early twentieth century. Peter Hitchcock writes:

No aspect of the Southern California oil boom in the early twentieth century is excluded, whether it be the chicanery used to secure land leases, the bribes doled out to maintain sympathetic policies in Washington, or the American oil industry's ability to extend American power through exploration and extraction around the world.[25]

The material substance, even where its exploitation or trade is not directly represented in Sinclair's text, is the basis of heightened material aspirations, sudden financial success and increased social mobility, and thus also as a source of friction between traditional modes of life, such as ranching and farming, and the forces of a supposed 'progress' or 'the future'.

Daniel Worden takes up Ghosh's point about the relative invisibility of oil in modern literature, and sees this as a kind of 'environmental unconscious' (Lawrence Buell):

Mowing the lawn, taking a road trip, getting a personal parking space at work, and teaching an adolescent child to drive ... It is the ruse of 'oil culture' that these activities do not typically strike us as activities having anything to do with drilling and refining, even though they are utterly dependent on the availability and social acceptability of fossil-fuel consumption.[26]

Another instance would be the usually unseen reliance of the internet, email and pervasive forms of virtual reality on the global energy infrastructure. One job of ecocriticism is to bring this 'unconsciousness' into fuller awareness.

Edna Ferber's *Giant* (1952)[27] (made into a film by George Stevens in 1956) dramatises, and celebrates, the emergence and normalisation of the oil industry in a Texas previously associated with cattle ranching. It contrasts the changing attitudes of an old ranch-owning family to the sudden rise of one Jett Rink, a formerly impoverished ranch hand who becomes an oil tycoon. Oil is primarily judged as a medium of *social* change, whether 'bad oil' when in the form of Rink's neo-feudalist business empires, or the false glamour of the private plane, or 'good oil' when a fossil fuel-based prosperity enables the paternalistic reform of the ranch according to an enlarged version of family values, one embracing previously denigrated Chicano workers. Oil enables a 'social belonging that is constructed around the family automobile, which serves not as a sign of the parasitical oil industry but instead as marker of independent mobility and renewed possibilities in postwar culture' (444). In this way, *Giant* can be said to instantiate the way oil functioned and functions 'as a vanishing mediator between industrialism and family life', rendering it often 'an absent presence in American culture' and Western culture more generally.[28]

Novels such as Sinclair's or Ferber's trace the effects of oil in the way one might expect in the tradition of the realist novel, through a focus on tensions in a family or a small human group. Oil is a major agent in the novels primarily as a catalyst, as making apparent or providing a condition for previously latent psychic or social conflicts. It permeates and, literally, powers a context in which traditional

forms of society, based on close communal bonds, local customs and inherited mores give way to looser, more individualist forms of society dominated by market forces. Nevertheless, both novels, because of their subject matter, cannot but produce for a reader some tension between traditional human-centred readings of a novel, with human character the primary determinant of plot and action, and a more post-human sense of the place of non-human agency in determining identity, personhood and relationships. A critical reader can no longer take oil to be some kind of background contingency or object for 'the characters', the occasion merely for releasing tensions, capabilities or insecurities already there. Instead, these novels can be seen to make more legible an environmental unconscious that underpins so many twentieth- and twenty-first-century dramas immersed in the deep material and psychic effects of a fossil fuel economy that is rarely made explicit. Alan Stoekl writes: 'that the illusion we call "Man" derived his "freedom" from the quantification and commodification of natural resources: oil to be sure, but also the steel, plastics and other materials that go to make up the "autonomist" lifestyle'.[29]

Other novels render what may be an 'environmental unconscious' in texts from the developed North into an all-too conscious nightmare dominating all life. 'Petro-magic-realism' is a term suggested in a well-known paper by Jennifer Wenzel to describe texts set in colonial or postcolonial contexts and which trace the huge cultural, political and environmental upheavals caused by the discovery of oil.[30] Petroleum becomes the basis for large official claims of future unheard-of wealth, of fairy tale-like transformations in living conditions, even as in fact it helps give rise to a centralisation of political power, and to environmental degradation. Oil becomes the basis of loss of personal liberty to the 'vampire state' so graphically described by Ken Saro-Wiwa, executed in trumped-up charges in Nigeria in 1995 for leading opposition to the despoliation of the Niger Delta, victim of a corrupt government in thrall to faceless economic and corporate forces based thousands of miles away.[31] In Arabic literature, Ghassan Kanafani's *Rijal fi al-Shams* (*Men in the Sun*) (1963)[32] and the novels of Abd al-Rahman Munif[33] depict the

destruction of traditional agrarian societies by an oppressive modernity dominated by oil extraction.[34]

In Helon Habila's postmodern novel *Oil on Water* (2011)[35] the central figure, a young journalist called Rufus, is witness to the environmental, social and psychic corruption of the oil delta of Nigeria. Almost all the people he encounters inhabit simplified personal narratives that make easy moral sense of the chaos and uncertainty around them, whether it is the ironically named 'the Professor', leader of a violent resistance group falsely claiming to speak for 'the People', or a petroleum engineer, with his colonial mansion and his talk of the promise of development. Such grand self-dramatisations are daily refuted by the opaque and complex sights and encounters of the delta, where the only sense of any moral centre Rufus finds is in people who refuse to have anything to do with oil, even if that means refusing compensation and being physically expelled from their land.

Habila's book also exemplifies, however, one clear danger for petrofiction, the inverse of that found in Sinclair and Ferber, who arguably overplay the primacy of human character and motivation. The danger is what Byron Caminero-Santangelo calls 'commodity fetishism', the false sense that the substance of oil itself must have inherently evil effects, separate from the motives and plans of the human beings who exploit it. Caminero-Santangelo criticises Habila's work for drifting too far towards such a sense of a quasi-magical 'oil curse':

*Oil on Water* brings to consciousness aspects of the crisis in the Niger Delta suppressed by various discourses, it also elides the *historical* generation of this situation by specific (neo-) colonial relationships. It has few references to the history of how foreign national governments, oil companies, the Nigerian petrostate, and resistance movements have shaped that crisis.[36]

## GENRE FICTION AND THE CHALLENGE TO REALISM

Debates about prose fiction and the Anthropocene repeat many of the same questions as petrofiction, but on an even vaster scale.

Both at their most forceful instantiate a claim Trexler makes for 'Anthropocene fiction' more generally, that 'melting ice caps, global climate models, rising sea levels, and tipping points have altered the formal possibilities of the novel' (13).

Trexler especially celebrates so-called genre fiction in this respect, with its attention to how deeply material things often envelop and even determine human action, in many thrillers or science-fiction novels, whether in the form of imagined new technologies or infrastructures, or the prominence of non-human forces such as rising oceans or a collapsing ecosystem.

Ecocritics have been a leading voice in calling for a revaluation of much so-called genre fiction. Heise observes how the very concept of the Anthropocene, in making us envisage the present from the viewpoint of a damaged future, already entails the common use of tropes associated with science fiction. 'Not only do works of environmental nonfiction draw increasingly on themes and narrative strategies of speculative fiction, but the Anthropocene itself can usefully be understood as a science fiction trope.'[37] Richard Crownshare foregrounds the popular genre of 'speculative realism', a form using basic conventions of realism but set in a hypothesised future – examples would be Robinson's 'Science in the Capital' trilogy, or Paolo Bacigalupi's *The Water Knife* (2015)[38] on disputes about water in a future desiccated Arizona. Crownshare risks the following generalisation: 'fictions of the Anthropocene might also be characterized as fictions of future or, what I call, speculative memory', i.e. usually dystopian scenarios that incorporate or enable retrospective overviews of how such a world came to be.[39]

Another relevant feature of science fiction is that it is 'the literary genre that most explicitly deals with the planet and with humanity as a whole ...' (Fredric Jameson).[40]

Ghosh, Mark McGurl and Trexler each argue for a drastic shakeup of the arguably elitist distinction between so-called serious literature and genre literature, particularly 'horror', 'science fiction' and 'gothic'. McGurl argues that genre fiction, especially the fantastic scenarios of some horror fiction, makes the problem of scale 'visible as a formal, representational, and finally existential problem',[41]

as opposed to the parameters of the realist novel, which typically 'eddies in an unheroic present'.[42] Jameson writes:

> It may be the very conventionality, the inauthenticity, the formal stereotyping of Science Fiction that gives it one signal advantage over modernist high literature. The latter can show us everything about the individual psyche and its subjective experience and alienation, save the essential – the logic of stereotypes, reproductions and depersonalization in which the individual is held in our time.[43]

Gry Ulstein finds an 'important analogy between Anthropocene discourse and cosmic horror', meaning texts in the 'weird horror' tradition of H. P. Lovecraft, in which planetary or cosmic scale monsters highlight the complete insignificance of human beings on the larger scale.[44]

This focus on genre literature might suggest that what is called for is a drastic reconsideration of current norms of literary quality. Ghosh makes a similar point in his *The Great Derangement: Climate Change and the Unthinkable* (2016).[45] This is a provocative if at times simplistic polemic against what he sees as the current paradigm of the literary novel as depicting some individual moral journey, the ubiquitous concern with kinds of identity politics, to do with gender, ethnicity, religion and so on. Ghosh finds here too often a blinkered limitation of ambition, oblivious to the wider kinds of spatial and temporal scale familiar in science fiction. He traces the 'separation of science fiction from the literary mainstream' as a 'slow and gradual' drawing of boundaries (effectively a demotion) (66) that took place during the nineteenth century, as bourgeois Western life became safer and more rationalised, leading to the undue privileging of a realist aesthetic whose principle was the exclusion of the supposedly improbable and a focus on the everyday. The result, he argues, is a now dangerous disjunction between the contemporary world and so-called serious literature, mostly oblivious to realities on the spatial and temporal scales familiar in science fiction. This

is part of the Great Derangement of his title. Novels engaged with mainstream issues of identity politics, even in the mode of protest, may be ultimately, he suggests, unwitting forms of 'collusion' with environmental destruction (121).

Ghosh criticises notions that literary fiction is no more than 'a form of bearing witness, of testifying, and of charting the career of the conscience' (128). This has had the unwelcome side effect of reinforcing in our thinking the privilege of the immediate human scale as the main and even exclusive reality – even as the realm of what we perceive around us with our five senses is becoming less and less reliable as a clue as to the state of the Earth. He also relates this to the far bigger question of why in southern Asia climate change is not a significant issue, despite it being a 'slow calamity that is quietly but inexorably destroying livelihoods and stoking social and political conflicts. Instead, political energy has increasingly come to be focused on issues that relate, in one way or another, to questions of identity: religion, caste, ethnicity, language, gender rights, and so on' (126).

Many ecocritics would argue against Ghosh here, his careless implication here that 'questions of identity, religion, caste, ethnicity, language, gender' have little to do with structures of power and economics implicated in global warming. There may also be another problem with counter-affirmations of genre fiction. Neither McGurl nor Ghosh effectively deal with the challenge of the way many readers actually relate to genre fiction in general or to so-called cli-fi in particular. For a reader's relationship to the dystopian futures now repeatedly depicted in films or in novels is very often to be engaged in a kind of doublethink. Images of flooding, social collapse, drought, water wars and so on are clearly the expression of an acknowledged, and growing, social anxiety, and yet also and contradictorily, of its *denial* through its transformation into forms of spectacle and thriller. Such cultural products easily lend themselves to being read as symptoms of a sense of political impotence or trivialisation.[46] The challenge is not so much of the public not knowing or not believing about global warming but an inability to integrate it into daily, routine modes of thinking and acting. So it tends to get evaded or displaced from being

an object of serious conversation into a source of quips and jokes, or uneasy, sensationalist entertainment. A consumerist type response even to current disaster scenarios is very much a phenomenon of Western consumer society, of Guy Debord's 'society of the spectacle',[47] with the TV cult of 'live' 'breaking news', with its pseudo-suspense dramas of constantly updated 'leading stories'. There is an apt satirical moment in the first book of Robinson's 'Science in the Capital' trilogy in which one of the central characters, trapped in a flooded Washington where the famous civic monuments are now surrounded by water, looks around see that the people in the office are all watching TV, which is simply broadcasting their own immediate locality (*Forty Signs of Rain*, 332–3).

Ghosh contrasts what he sees as the parochial condition of Western novels with works coming from India and Arabia, places where the values of a consumerist individualism are less all-determining, and also with traditions of epic and myth that are more comfortable with dealing with large human collectives and non-human agency, such as Munif's novel *Cities of Salt*. For writers in Europe and North America, however, the challenge would be that of disconnecting associations of climate fiction from what might be nicknamed the consumerist culture of the 'good read', which acts in this case as effectively a form of environmental denial.[48]

Ghosh's opposition between a complacent realism and the inventiveness of genre fiction and postcolonial writers like Munif can seem a simplification. In fact, many literary features usually associated with 'postcolonial contexts' have become features of the twenty-first-century Western novel. With its bizarre kinds of action at a distance, the collapse of safe distinctions between the trivial and the disastrous, and the proliferation of forces that cannot be directly perceived, the Anthropocene becomes deeply counterintuitive. It may find its analogue in modes of the fantastic, new forms of magic realism, or texts in which old distinctions between 'character' and 'environment' become fragile or break down.

Elizabeth DeLoughrey reads such a turn away from realism in the work of New Zealand Maori author Keri Hulme, seeing it as 'suggestive in an era in which our knowledge of global climate

change produces new economies of speculation'.[49] Magic realist writing has been primarily associated as a form with world-perimeter societies where, as in the mass plantation ecologies of the Caribbean, people 'lack autonomous control over the production of nature, and hence over the production of social reality, [and so] this reality appears illusory or irreal because it is authored or manipulated by outside powers' (Michael Niblett).[50]

But in fact, this dislocated sense of reality is hardly now confined, if it ever was, to postcolonial contexts. The Anthropocene context now renders it a manifestly global condition, albeit one registered in very varied and often iniquitous ways.

Karen Tei Yamashita's *Tropic of Orange* (1997)[51] is a fine example of how magic realist and genre fiction techniques can become a mode of environmental analysis. Set largely in Los Angeles, it follows diverse characters through a week of surreal disasters caused by 'magical' events that warp the line of the US–Mexico border, 'smashing Mexico and Los Angeles together' (14) in revelatory distortions of temporal and spatial scales. The orange of the title refers to a fruit taken from Mazatlán in Mexico where an L.A. reporter called Gabriel was trying to build a kind of pastoral haven for himself, a place of supposed retreat, escape and self-discovery – all values which echo anachronistically Romantic concepts of 'nature'. The scrawny orange that grows there happens to be sited precisely on the Tropic of Cancer and, as another character brings it back to Los Angeles, the tropic, 'a line – finer than the thread of a spiderweb' (12), moves north too. The distortions of space crash into what becomes a huge traffic jam on the Harbor Bay Freeway, spreading to paralyse the city, entangling people and histories previously kept apart. 'In a moment, everything could fold itself, and time stand still' (86). Spreading fires force the homeless out of their underpass shelters, and they move into the abandoned cars on the highway, creating a temporary community that is overtly utopian and pastoral – until attacked by the army. The strange supernatural character who carries the orange, called Arcangel, claims to be centuries old and to have witnessed the violent colonial history of which Los Angeles is a product. As Melissa Sexton shows, the fantastic element of Yamashita's novel serves as

the making visible of the historical, social and ecological dynamics and violence underlying the modern city:

Once Arcangel crosses the border, a deluge of people and material goods follows, the flows of capital solidifying into a crowd of people, corn, bananas, coffee, and sugar cane. Arcangel also carries history across the border with him, the murdered peoples and destroyed lands of the South: '*the halls of Moctezuma and all 40,000 Aztecs slain*', '*the burned and strangled body of the Incan king Atahualpa*', '*25 million dead Indians*', and '*the rain forests, El Niño, African bees, panthers, sloths, llamas, monkeys, and pythons*'. (200–01; emphasis in original)[52]

The spatial distortions become such that the prose describing events can be hard to follow, as 'Everything's colliding into everything' (192). Non-human animals ('*panthers, sloths*', etc.) transgress both the literal and conceptual spaces to which modernity had consigned them.

'Magic realism' is a mode originally associated with novels that engage conflicting 'modern' and 'traditional' belief systems or religions in colonial and postcolonial contexts. It also commonly features the breakdown or destabilisation of the Western strict human/animal distinction.[53] Its increasing use in so-called first world contexts, such as Yamashita's Los Angeles or Self's London, is symptomatic of the kind of scalar, cognitive, economic and ecological dislocations associated with both global capitalism and with the Anthropocene, though Sexton herself prefers Jason Moore's coinage 'the Capitalocene' for the newly recognised global context (20), stressing, as its name implies, the central agency of modes of capitalism and power entrenched over half a millennium.

## CONVENTIONS OF CHARACTERISATION

How might trying to conceive reality on what are often counter-intuitive scales affect the conventions of and modes of characterisation

in the novel? It was one of the criticisms of Robinson's 'Science in the Capital' trilogy that it raised this issue but did little to question the rather conventional psychology of its cast of characters. This is despite the author's formulation in a 2004 interview of just this problem of characterisation for novelists and film-makers, arguing that speculative fiction set in the near future can help at least raise it to more general consciousness:

Sometimes it seems like everything is possible; on the other hand, it also feels like nothing fundamental will ever change again (capitalism); and in that weird dichotomy of feeling we carry on day by day. It's a strange sensation and I think day-after-tomorrow sf can capture it very nicely, if wielded correctly. Here is a place where art as fidelity to the present may even demand science fiction, as I've been saying or rather practicing since the 1970s.[54]

The risk of such consciousnesses raising would be that it furthers:

a process whereby the present is derealized, news of some new extinction threat becomes déjà vu ... in an odd psychic condition, which I can testify to, in which environmental knowledge slides into a form of familiarity and inevitability that in itself has the comfort of denial.[55]

Robinson's trilogy raises powerfully but then evades the issue of how the Anthropocene, a context challenging conceptions of what human beings are, must also affect the conventions of characterisation in a novel. If, traditionally, the novel has been a form valued for its inventiveness in representing the interior life, how might this adapt to a context entailing impersonal global dislocation? Frank Vanderwal's changing sense of self remains the human focus of Robinson's narrative, but this becomes a fragile exercise in dubious scale-framing whereby vast social and political changes are dramatised within the account mainly of one individual character's

bland trajectory of personal development and self-realisation, in the old *David Copperfield* manner.

Given that the novel as a genre tends overwhelmingly to focus on stories of individual growth or dramas of consciousness, crises of identity or of relationship, etc., questions must arise on the limits of what may seem the form's built-in individualistic stance, its reinforcing the privilege of the immediate human scale as the main and even exclusive reality. To what degree does a focus on the possible transformation of consciousness actually evade more direct economic and ideological issues, and demands for direct collective action?

Pieter Vermeulen engages with the Anthropocene as a peculiar new form of 'trauma', challenging the way the novel as a literary form has long served to underwrite a specifically Western notion of human personhood:

From [György] Lukács on, novel theory has underlined the intrinsic connection between the modern novel and the formation of a 'self-governing individual' that comes into existence by negotiating its relation to the social reality that sustains it, a process with which the reader is invited to empathize ... The genre's unprecedented investment in psychological depth and in the detailed mapping of its characters' environment subtends what Nancy Armstrong calls 'an ubiquitous cultural narrative that ... measures personal growth in terms of an individual's ability to locate him- or herself productively within the aggregate.'[56]

'Psychological depth', personal growth in a social context, a sense of autonomous individuality – none of these work for Don DeLillo's *Point Omega* (2010),[57] Vermeulen's topic in another essay. He also takes up the question of genre fiction, more sceptically than some, finding it limited as a mode, principally, of too escapist entertainment. While such work may have 'the means to *evoke* nonhuman otherness, it cannot therefore do the cultural work of making it *matter* as a formal and existential *problem*'. Better would be the aim

of 'recording the breakdown of the human in the face of the non-human in the very form through which the human has traditionally been imagined: in the literary novel', as with DeLillo.[58]

*Point Omega* can be read as an attempt to overcome the reliance of the novel form on distinctive events and identifiable individual agents, which can be considered as limitations on the novel's ability to abandon conventional realisms and imagine the geological ramifications of culture.[59] Two chapters frame DeLillo's text at its beginning and end, entitled 'Anonymity' and 'Anonymity 2'. Both are set in the Museum of Modern Art in New York, where David Gordon's installation *24 Hour Psycho* is playing. This is a projection of Alfred Hitchcock's famous film, with no sound, slowed so as to take exactly twenty-four hours. Vermeulen argues that, in reducing the human action to this weird and silent slow motion, *24 Hour Psycho* takes up 'a film that is often seen as a paradigmatic illustration of Freudian psychoanalysis, only to remove the model of subjectivity that underlies it' (74). The effect of the slowed, silent film is to foreground people as merely physical or material entities. Vermeulen reads DeLillo as imitating this de-psychologising effect in his verbal narrative, in a rendering of a 'different mode of temporality ... *not* described as an escape from human time into a timeless realm that successfully transcends it – instead it is an experience that locates a rupture *within* human life' (75). That is to say, human narrative time is simply being registered on a different scale, in a reifying, de-'humanising' way.

Between these framing chapters the bulk of the text depicts a peculiarly eventless interview between a young film-maker and a retired defence consultant, Richard Elster, who is trying to give 'words and meanings' to the Iraq war. Elster lives in the desert, and he uses the sense of deep time in the desert landscape to project for him a sense of refuge from human violence. In sum, Vermeulen reads DeLillo's text as exploiting the affects that arise from juxtaposing plot and character seen on normal or expected timescales with a sense of inhuman materiality and deep time that renders them radically contingent.

Vermeulen's work has been among the most innovative in considering the strain that a twenty-first-century environmental

awareness can pose to the novel as a form, perhaps even taking some of its conventions to breaking point:

If the novel form has traditionally been invested in the exploration of the fate of the individual and its relation to its social contexts, the discourses of the Anthropocene and on the geological ramifications of human culture … present the contemporary novel with the challenge: that of scaling up its imagining of the human to the dimensions of biological and geological time.[60]

In *Point Omega* elements of the plot that might normally set up expectations of psychological depth and narrative resolution are short-circuited. A stalker of Elster's daughter features in an unresolved subplot in which she is kidnapped but the stalker never identified. The text features a number of anonymous characters. Vermeulen quotes Peter Boxall on the engagement with temporality in contemporary fiction: ' "the perception that the narrative mechanics which have allowed us to negotiate our being in the world, to inherit our pasts and to bequeath our accumulated wisdom to the future, have failed" ' (71).[61] Narrative forms survive, but less a mode of immersive truth (Erin James) or humanist interconnection than as an engaged, chastened reckoning with human finitude.

Vermeulen's interest in novels like *Point Omega* or Tom McCarthy's *Remainder* (Paris: Metronome Press, 2005) is in texts that engage with effects of trauma that are not linked to the usual narrative anchors in psychological realism or its 'generic investment in psychological depth, social accommodation, and identification'.[62] DeLillo's novella exemplifies a tendency already observed with poetry and ecopoetry, the move away from texts based on some sort of sequential narrative unfolding at a pace that makes sense in terms of given categories of human experience, in favour of a disjunctive art of juxtaposition, of multiple time frames and dislocations.[63] Building on the observed analogy between the structure of DeLillo's novel and the poetic haiku, one can say that the novella pushes narrative in a direction normally associated with the poetic as non- or

anti-narrative, as with, say, various so-called ecopoems in which a sense of other temporal scales suddenly erupts upon the mind, an epiphany of non-meaning or other meaning. This comparison, along with the obvious prominence and even privilege given to nonverbal or film art in the novella, underlines the query that ends Vermeulen's essay, on the challenge of rethinking human life, and our ethical and political vocabulary (fairness, respect, etc.) once old scalar norms are accepted as fragile or inadequate:

[this is] the question of whether the novel form will be able to respond to that imaginative challenge, or whether its undeniable limitations as a cultural force will limit its role to communicating the urgency of a new law of the earth it is no longer able to legislate.[64]

Will Self's short story of the early 1990s, 'Scale', which is in part on climate change,[65] can be read as taking further, in a different direction, the questions of characterisation broached by Vermeulen in relation to DeLillo. The character created as the speaker of Self's peculiar monologue certainly seems more fitted than Robinson's Vanderwal to dramatise the strains and pressures of an Anthropocene context, what with his psychic incoherence, his derangements of scale, and, despite claims to the contrary, his loss of proportion. All in all, 'Scale' highlights the way a text on climate change may make even the notion of making sense itself rather fragile.

The unnamed speaker in Self's 'Scale' is a solitary morphine addict and minor writer, struggling to support himself and to make compulsory payments to his divorced wife. He lives off the royalties from his detective fiction, but the nerdish obsession of his life is motorways. He has a projected academic thesis entitled 'No Services: Reflex Ritualism and Modern Motorway Signs (with special reference to the M40)'. A later section of the story is set in his old age, by which time he has achieved the title of 'the Macaulay of the M40' with such books as *A History of the English Motorway Service Centre* and papers with titles like 'When is a Road not a Road?'. This nerdish addict lives in a bungalow off the M40 motorway in the town of Beaconsfield,

right next to a miniature model village for which Beaconsfield is most known. The focus of this story is his loss of a sense of scale, triggered initially by a disorienting piece of road signage for cars leaving the motorway: 'I fell into this gap', he says, 'and lost my sense of scale' (94). A drugged-up dream sequence sees him enter, at reduced size, a small simulacrum of his own bungalow sited in the model village, and then, within that, an even smaller copy of the same building as he shrinks again and enters another smaller copy, and then again, till he reaches sub-atomic size, becomes vulnerable to the quantum uncertainty principle, is accidentally observed by a passer-by and vanishes.

Such incongruity in 'Scale' can be related to the issue of the limits of narrative in relation to the scale and complexity of the Anthropocene. 'Scale' is in part a study of the psycho-pathology of the motorist, his entrapment in a world of driving and waste, with such images for the motorway as 'six lanes of blacktop twisting away from you like some colossal wastepipe, through which the automotive crap of the metropolis is being voided into the rural septic tank' (113). The trajectory of the story entails drastic climate change, and it ends in a future in which the speaker, in old age still an enthusiast of motorways, has had to swap his car for a golf buggy to obey new laws making all vehicles electric and with a speed limit of 15 miles an hour.

We also read:

I am also comforted in solitude by my pets. One beneficial side-effect of the change in climate has been the introduction of more exotic species to this isle. But whereas the *nouveaux riches* opt for the Pantagruelian spectacle of giraffes cropping their laburnums, and hippopotamuses wallowing in their sun-saturated swimming pools, I have chosen the more elegant frill necked lizard ...

When evening comes, and the visitors have departed, I let it out so that it may roam the lanes and paths of the model village. (220)

The effect of Self's focus on scalar dislocation is to elicit a post-human as opposed to humanist conception of character. That is to

say, the seemingly coherent if eccentric personhood of the central speaker seems, on examination, to be merely the surface effect of an impersonal dynamic of which he is unaware. This is marked as a reader notices that many of the narrative incidents are in fact generated by the use and motivation of unacknowledged puns, all on various senses of the word 'scale'. For instance, the speaker's amateur morphine production leaves all sort of 'scale' on his crockery. He has to drive down the motorway to the town of High Wycombe to buy a descaler for his kettle. His bathroom scales are stolen by a member of a youth cult that gathers in the model village. He discusses the scales of lizards, then later visits the Lizard promontory in Cornwall. With so much of the action based on punning in this way the text seems to challenge any reader committed to making sense of things in terms of some relatively coherent 'real-life' and linear storyline.

Puns, as Richard Walsh says, enact the destabilisation of normal scales of reference.[66] The smooth surface of the linear narrative turns out to be the surface projection of what is largely semantic chance. Jonathan Culler writes that puns foreground 'an opposition that we find it hard to evade or overcome: between accident or meaningless convergence and substance and meaningful relation'.[67] Puns sit incongruously on the borders of meaning and accident. As such, they are also peculiarly appropriate as a device for a climate change text, one which juxtaposes the clashing topics of a blinkered motorway obsession and global warming.

Self's 'Scale' exemplifies how the most interesting and engaging literary prose on climate change is of often of the uncomfortably comic kind – uneasy comedies of situation based on the scalar discrepancy between character and context. T. C. Boyles's *A Friend of the Earth* was partly of this nature. Other examples would be Self's own *The Book of Dave*, Ian McEwan's *Solar* (2010)[68] or several short stories by Helen Simpson (*In-Flight Entertainment*, 2011).[69] Simpson's short story 'Inflight Entertainment' (6–21) depicts a conversation in the first-class section of a plane on the way to Chicago, between a selfish businessman and an aged climate scientist. The scientist has given up as hopeless the idea of

any sort of campaign on the issue and his dream is now just of joining 'the *other* mile-high club' (19), meaning those who die at 6,000 feet. Simpson juxtaposes uncomfortably a routine concern with food, service and comfort with images of social collapse already become clichéd and tired. Another story depicts a young couple holiday-hiking around France, as the young women becomes exasperated with her partner's endlessly harping on at picnics about the end of the world.

Self's 'Scale' text is *sort of* funny, but it is not the sort of humour that serves to reinforce social consensus, let alone stereotypes. In his study of the nature of humour the philosopher Simon Critchley quotes Henri Bergson, that 'we laugh every time a person gives an impression of being a thing'. Also:

The comic world is not simply 'die vekehrte Welt', the inverted or upside-down world of philosophy, but rather the world with its causal chains broken, its social practices turned inside out, and common-sense rationality left in tatters.[70]

Self's text seems designed as a critique of the norms of scale that characterised the realist novel during its Victorian heyday. The narrator quotes a telling criticism from his father:

There is no sense of scale in your books … Really important writing provides some sense of the relation between individual psychology and social change, of the scale of things in general. You can see that if you look at the great nineteenth-century novels. (208)

Self dramatises a world that makes a mockery of Henry James's famous statement that 'What is character but the determination of incident? What is incident but the illustration of character'[71] (122). Here both incident and character are deeply contaminated by the effects of an unmeaning programme, and the context of a general and genuine loss of proportion.

Put Robinson and Self next to each other and it is not hard to see which writer's mode of characterisation would better suit the kind of world in which, to repeat Bill McKibben's point about CFC gases and the ozone layer in the 1980s, one can imagine humanity accidentally consigning itself to oblivion by the use of underarm deodorants.[72]

The challenge of representing the Anthropocene in aesthetic form is not one that admits easy conclusions. The global scope and counterintuitive scale of key issues seem to pose new problems. One of these may lie simply with the very ambition or expectation that some sort of comprehensive representation of the Anthropocene is possible. Given that the environmental issues often exist on several, different scales at the same time, involving multiple human and non-human factors, then no conceivable representation of some overall, planetary scenario is going to escape claims that it is evasive in some way or another. A vivid locally realist treatment, such as Kingsolver's, also risks shrinking towards being only another human-interest story, as I have argued elsewhere,[73] while texts that deploy provocative tropes of the fantastic, such as Self's or Yamashita's, may seem liable to the criticism that they evade issues of global warming and responsibility as they already impinge on current, day-to-day, mundane reality. What the environmental challenge does achieve, however, is a continual probing of the inherited nature and limits of the novel as a form, the need for a newly urgent inventiveness.