Parallax

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/tpar20

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To cite this article: Diletta De Cristofaro (2021) Patterns of Repetition: Colonialism, Capitalism and Climate Breakdown in Contemporary Post-Apocalyptic Fiction, Parallax, 27:1, 12-30, DOI: 10.1080/13534645.2021.1976462

To link to this article: https://doi.org/10.1080/13534645.2021.1976462

Published online: 20 Dec 2021.

parallax, 2021, Vol. 27, No. 1, 12–30, *Troubling Globalisation*
https://doi.org/10.1080/13534645.2021.1976462

Patterns of Repetition: Colonialism, Capitalism and Climate Breakdown in Contemporary Post-Apocalyptic Fiction

Diletta De Cristofaro

Scenario one, from *The Marrow Thieves* (2017) by Cherie Dimaline (Métis): in a post-apocalyptic North America ravaged by climate breakdown, where 'all the industry-plundered Great Lakes [are] poison', Indigenous people find themselves trapped, once again, in a residential school system.[1] This time, the residential schools are 'harvesting' Indigenous people for their ability to dream, in order to treat the epidemic of dreamlessness that is killing the white population. Scenario two, from Matthew Sharpe's *Jamestown* (2007): following environmental devastation that has reduced the United States to embattled city-states, white men belonging to the Manhattan Company venture into the Indian territory of Virginia to trade for resources and found the colony of Jamestown, a name oddly reminiscent of the first permanent English settlement in North America. Scenario three, from 'When This World is All on Fire' (2001) by William Sanders (Cherokee): American coastal areas are under water, the inland territories are reduced to a desert, and Cherokee people's sovereignty over reservation land is constantly threatened by white squatters from the rest of the United States. As a character wryly puts it, 'Twenty-first century, better than five hundred years after Columbus, and here we are again with white people trying to settle on our land'.[2] Dimaline's, Sharpe's, and Sanders's scenarios belong to a strand of contemporary Anglophone post-apocalyptic fiction that confronts the prospect of climate breakdown defining our Anthropocene present through patterns of repetition linking these fictions' environmentally devasted futures to the colonial past.[3] Through these patterns, the narratives in question suggest that the colonial past is, in fact, no past at all, but something actively shaping our present and future. These post-apocalyptic scenarios bring to the fore global networks of (neo)colonialism and capitalism that lie at the heart of the Anthropocene, highlighting the legacies of a long history of imperialist practices of exploitation in the environmental risks of today's globalised world.

In this article, I analyse this strand of contemporary post-apocalyptic fiction to contribute to a body of scholarship that troubles the very notion of the Anthropocene, both in its pretence of a homogenous humanity equally responsible for, and equally experiencing, climate change across the globe, and in its conception of a linear historical trajectory from past stability to (near-)future crisis. The former narrative wilfully erases the inequalities propping up global capitalism, themselves a legacy of colonialism and of racist

hierarchies that saw only certain populations being considered fully human during the colonial era. From here, arises thus 'the basic, critical claim of climate justice: that there are vastly different experiences of climate change according to race, ethnicity, gender, wealth, and nationality'.[4] The latter conception, as Kyle Powys Whyte (Potawatomi) underlines, ignores how 'the hardships many nonIndigenous [sic] people dread most of the climate crisis are ones that Indigenous peoples [and, we could add, other racialised non-Western peoples] have endured already due to different forms of colonialism: ecosystem collapse, species loss, economic crash, drastic relocation, and cultural disintegration'.[5]

The article is divided into three sections. I begin with a section that surveys the current state of the debate on the notion of the Anthropocene as a geological epoch by drawing on the work of the Anthropocene Working Group (AWG). I then consider theoretical perspectives that trouble the understanding of the epoch emerging out of the AWG as it risks reinforcing the issues outlined above. In particular, I focus on a different history of the Anthropocene from the AWG's, a history that locates the Anthropocene's beginnings in the colonial origins of the capitalist world system, rather than in the mid-twentieth century, and that addresses what Kathryn Yusoff terms the 'racial blindness of the Anthropocene'.[6] In the final section, through analyses of David Mitchell's *Cloud Atlas* (2004), Jeanette Winterson's *The Stone Gods* (2007), 'When This World is All on Fire', and *The Marrow Thieves*, I argue that post-apocalyptic fiction is well positioned to contribute to the project of troubling the Anthropocene and, in so doing, late twentieth- and twenty-first-century globalisation, with which the epoch is entwined in the AWG's hypothesis of the Great Acceleration. For colonialism, and thus the capitalist world system it originates, was in its origins bound up with traditional apocalyptic logic.

The Anthropocene as a Geological Epoch

As a notion that 'crystallise[s] the growing realisation that human activities – or, more often, the unintended consequences of human activities – ha[ve] fundamentally changed the Earth System', the Anthropocene was launched by Paul Crutzen and Eugene Stoermer in 2000.[7] Implicit in this notion was the idea that the Anthropocene marked a new geological epoch, bringing the previous epoch, the Holocene, to an end, 'because of the inferred geological significance of the altered Earth System processes'.[8] While the term 'Anthropocene' has been widely adopted across academic disciplines and in the media ever since its popularisation at the beginning of the twenty-first century, it is, at the time of writing (March 2020), not yet a formalised geological time unit.

The Anthropocene Working Group has been examining the case for the Anthropocene's formalisation since 2009.[9] In 2016, the AWG recommended the formalisation of this epoch to the 35th International Geological Congress, proposing the mid-twentieth century as the location of the Anthropocene's GSSP (Global Boundary Stratotype Section and Point), more commonly

known as a 'golden spike', namely, the geological marker that identifies the beginning of a geological epoch.[10] As Simon L. Lewis and Mark A. Maslin explain, 'Each "golden spike" is a single physical manifestation of a change recorded in a stratigraphic section, often reflecting a global-change phenomenon'.[11] Indeed, while the AWG suggests radionuclides that came from atomic-bomb detonations as the primary marker of the Anthropocene's golden spike, the mid-twentieth century is more broadly defined by the so-called 'Great Acceleration'.[12] This is the sharp increase in human activities leaving an enduring imprint on the Earth System, including 'a major expansion in human population, large changes in natural processes, and the development of novel materials from minerals to plastic to persistent organic pollutants and inorganic compounds'.[13]

Importantly for the purposes of this article and special issue, the notion of a Great Acceleration identifies 'a sharp increase in the rate of development in virtually all spheres of an *increasingly globalised human society*'.[14] Indeed, in order to support the hypothesis of the Great Acceleration, Will Steffen of the AWG identifies socio-economic indicators 'closely connected with globalisation', such as population growth, economic activity, energy consumption, resource use, transport and communication, foreign direct investment and telecommunications. In these terms, globalisation can be seen to bring about measurable 'changes in the structure and functioning of the Earth System'.[15] Thus, the AWG's proposal, which appears at present to be the most likely to be adopted when/if the International Commission on Stratigraphy agrees to formalise the Anthropocene as a geological epoch, sees the Anthropocene as coterminous with twentieth- and twenty-first-century globalisation.

Troubling the Anthropocene: Theoretical Perspectives

As John McNeill of the AWG notes, 'The debates, both within the Anthropocene Working Group and at large, about the best start date for the Anthropocene turn in part on a philosophical question: Should one invest greater significance in the beginning of a process or the beginning of its discernible impact?'.[16] The qualifier 'in part' is key: as many scholars across the Humanities and the Social Sciences point out, this question is not solely philosophical but has significant political and ethical implications.[17]

The alternative history of the Anthropocene explored in this section thus locates the beginning of the epoch not in mid-twentieth-century globalisation but in the early-modern globalisation of the 'Columbian Exchange', namely, the exchange of plants, animals, and diseases between the Old World of Europe, Asia and Africa and the New World of North and South America that Columbus opened up to conquest.[18] Crucially, this alternative dating rests on an understanding of globalisation not as a relatively recent process but as something with a much longer history rooted in colonialism, and therefore foregrounds how the Anthropocene is characterised by a long history of violent global networks of power and capital, which are instead erased

by the AWG's recommendation.[19] This other history of the Anthropocene speaks to the patterns of repetition I identify in contemporary Anglophone post-apocalyptic fiction linking these narratives' environmentally devasted future scenarios to the colonial past.

Jason W. Moore, for instance, traces the origins of what he terms Capitalocene, rather than Anthropocene – more on this terminological choice below – back to the dawn of capitalism in the 'discovery' of the New World.[20] As he argues, the typical periodisation that dates the beginning of the Anthropocene back to the Great Acceleration or the Industrial Revolution, 'denies a longer history of capitalism that begins in the era of Columbus', an era that 'marked a turning point in the history of humanity's relation with the rest of nature'.[21] While, Moore continues, 'there is no question that environmental change accelerated sharply after 1850, and especially after 1945, it seems equally fruitless to explain these transformations without identifying how they fit into patterns of power, capital and nature established some four centuries earlier'.[22] As suggested by the term 'Capitalocene', Moore sees the turning point in humanity's relation with nature as also a turning point in the history of capitalism. Moore speaks, indeed, of 'a revolution in the techniques of appropriating Cheap Natures, especially the Four Cheaps of food, labor, energy, and raw materials'.[23] This revolution consisted in a new way of conceptualising the world and the Nature/Society binary, namely, 'the separation of humans from the rest of nature, and the domination of the latter by the former', as well as in imperialist structures and practices of exploitation over everything that was conceived as Nature, including racialised non-Western peoples.[24]

Lewis and Maslin's 'Orbis hypothesis' similarly locates the beginning of the Anthropocene in the colonial era. Specifically, Lewis and Maslin identify the 1610 Orbis spike as an appropriate GSSP marker.[25] This spike captures the dip in atmospheric CO_2 corresponding to the colonial genocide of the native population of the Americas, whose numbers dropped from 54 million people in 1492 to 6 million in 1650.[26] The name of this hypothesis – 'orbis', the Latin for 'world' – denotes the same link between the Anthropocene and a long violent history of global capitalism outlined by Moore, for the 'industrialization and extensive fossil fuel use [that characterise the later Anthropocene] were only made possible by the annexing of the Americas'.[27]

The AWG dismisses the Orbis hypothesis as 'not optimal as regards chronostratigraphic definition'.[28] Yet this hypothesis acts as a corrective to the two issues inherent in the notion of Anthropocene which I introduced at the beginning of this article. These issues risk being reinforced by the AWG's understanding of the Anthropocene as coterminous with twentieth- and twenty-first-century globalisation which in turn erases its colonial roots: first, the Anthropocene's pretence of a homogenous humanity, and, second, its conception of a linear historical trajectory from past stability to (near-) future crisis.

In its very name, the Anthropocene is concerned with the *anthropos*, the human, as a planetary geological agent. Yet there are profound inequalities in terms of both the populations responsible for the highest greenhouse gas emissions now and, going back, for the historical origins of anthropogenic climate change – the Global North – and in terms of the populations that bear the brunt of the environmental crisis – the Global South and Indigenous peoples.[29] As Yusoff puts it, 'the racial blindness of the Anthropocene[,] a willful blindness that permeates its comfortable suppositions and its imaginaries of the planetary', 'is predicated on the presumed absorbent qualities of black and brown bodies to take up the body burdens of exposure to toxicities and to buffer the violence of the earth'.[30] These inequalities, in turn, 'reflec[t] and reinscrib[e] historical cartographies of exploitation and colonialism'.[31] Practices like emissions trading and offsetting, for instance, often consist in a form of carbon colonialism that perpetuates the long history of land dispossession in the Global South.[32] Equally, infrastructures like the Dakota Access Pipeline, by violating the sovereignty of Indigenous peoples and subjecting them to environmental and health hazards, demonstrate the ongoing imbrication of colonial and environmental injustice in the name of global capital.[33]

As Kali Simmons (Oglala Lakota) reminds us, it is also the case that 'the subject position of the human has been made available only to certain kinds of bodies at certain time' and that 'Indigenous history demonstrates that the category of the human has repeatedly functioned as a tool of settler colonial assimilation'.[34] Indeed, 'in its reassertion of universality', namely, in its suggestion that 'all humans are equally implicated under the sign of the "anthropos"', the Anthropocene manifests itself as '*the extension and enactment of* [a] *colonial logic* [that] *systematically erases difference*, by way of genocide and forced integration and through projects of climate change that imply the radical transformation of the biosphere'.[35] It is precisely in order to render this implicit alignment of the Anthropocene with colonial logic and practice explicit that Heather Davis and Zoe Todd (Métis) support Lewis and Maslin's Orbis hypothesis. Similarly, it is in order to counter how 'Inequality, commodification, imperialism, patriarchy, racism and much more […] all have been cleansed from [the Anthropocene's] "Humanity"' that Moore proposes the term 'Capitalocene'.[36] As he argues, 'Global warming is not the accomplishment of an abstract humanity, the *Anthropos*. Global warming is capital's crowning achievement. Global warming is *capitalogenic*'.[37] And in being a product of capital, itself arising out of colonialism in Moore's thesis, global warming is bound up with imperialist, racist, and patriarchal practices.

These critiques of the homogenising tendencies of the Anthropocene, which obscure the violence and inequalities that lie at the very heart of the epoch, often coalesce with critiques of the Anthropocene's implicit conception of history. Daniel Hartley, for instance, argues that dating the epoch back to the Industrial Revolution and the invention of the steam engine – or we can add, given the latest AWG's recommendation, back to the atomic age – points to

the Anthropocene's technological determinism. This is 'the notion that technological innovation is the motor of history', which, in turn, goes hand in hand with a 'Whig view of history as one endless story of human progress and enlightenment'.[38] Indeed, the Anthropocene's conception of history reproduces key features of linearity and teleology that define Western modernity. Where modernity's historical telos is more progress, a *telos* that serves to justify oppressions and exploitations as, allegedly, necessary steps on the path to a better world (consider for instance the colonial discourse of the civilizing mission), the Anthropocene raises the spectre that the byproducts of progress might lead to the catastrophic end of the world. But, crucially, this telos is projected in the more or less near future and, in doing so, the thought of the many worlds that have already ended in the making of so-called modern progress is banished.

Whyte identifies the crux of this second type of criticism when arguing that 'Indigenous peoples challenge [the Anthropocene's] linear narratives of dreadful futures of climate destabilization with their own accounts of history that highlight the reality of constant change and emphasise colonialism's role in environmental change'.[39] Indeed, 'Colonialism, such as U.S. settler colonialism, can be understood as a system of domination that concerns how one society inflicts burdensome anthropogenic environmental change on another society'.[40] Yusoff reinforces this point, writing: 'If the Anthropocene proclaims a sudden concern with the exposures of environmental harm to white liberal communities, it does so in the wake of histories in which these harms have been knowingly exported to black and brown communities under the rubric of civilization, progress, modernization, and capitalism'.[41] Thus, undermining modern narratives of progress and the sense of a linear trajectory from past stability to (near-) future anthropogenic crisis, Whyte speaks of Indigenous peoples' current experience of climate crisis as '*déjà vu*. This is because [today's] climate injustice is part of a cyclical history situated within the larger struggle of anthropogenic environmental change catalysed by colonialism, industrialism and capitalism'.[42] Davis and Todd equally trouble the linearity of history implicit in the notion of Anthropocene, when they speak of the 'seismic shock of dispossession and violence' produced by colonialism. This seismic shock 'kept rolling like a slinky – pressing and compacting in different ways in different places as colonialism spread', and its reverberations are now finally reaching those countries that were responsible for the introduction of colonial and capitalist practices across the globe in the first place.[43]

Whyte's arguments are particularly important for the purposes of this article as he observes that, by portraying *future* science-fiction scenarios, typical dystopian and post-apocalyptic literary engagements with the Anthropocene risk 'eras[ing] certain populations, such as Indigenous peoples, who approach climate change having already been through transformations of their societies induced by colonial violence'.[44] In the next section, I analyse examples of Anglophone post-apocalyptic fictions, by both Indigenous and white authors,

which seek to correct the genre's shortcomings identified by Whyte through patterns of repetition that complicate the linearity of the Anthropocene's implicit conception of history and highlight the legacies of colonialism within our present.

Troubling the Anthropocene: Perspectives from Post-Apocalyptic Fiction

Unsurprisingly, given the increasing popularity of the notion of the Anthropocene since its launch in 2000, the past two decades have seen an increasing amount of fiction dealing with anthropogenic climate change, so much so that 'climate change fiction has been labeled cli-fi and identified as a genre of fiction in its own right'.[45] Yet, adding to Whyte's concerns above, Matthew Schneider-Mayerson notes that authors of these fictions often tend to 'portra[y] climatic destabilization primarily as a problem for white, wealthy, educated Americans and secondarily gestur[e] toward its consequences for human beings in general – the monolithic and flattened "we" of *homo sapiens*. In this way they ignor[e] climate justice'.[46] While Schneider-Mayerson's article focuses on American literature, this is a criticism that, I believe, needs to be taken seriously for fictional engagements with the Anthropocene beyond America, especially given the issues, outlined in the previous section, inherent in this notion. Nevertheless, I trace here the emergence of a growing strand of contemporary Anglophone post-apocalyptic fiction that brings to the fore the Anthropocene's entwinement with colonial-capitalist modernity. This strand includes novels by canonical writers – i.e. writers who are prize-winning, critically acclaimed, and reach a wide audience – like Dimaline, Mitchell and Winterson, which shows how, slowly but hopefully surely, a more attentive engagement with the racial politics of the Anthropocene and climate justice is entering mainstream literature. My argument here is twofold: first, I contend that post-apocalyptic fiction is ideally placed to interrogate the legacies of colonialism within our Anthropocene present as colonialism itself was fueled by traditional apocalyptic logic, an element signaled by the colonial and apocalyptic trope of the New World. Secondly, I show how the patterns of repetition that characterise this strand of post-apocalyptic fiction trouble the understanding of the Anthropocene put forward by the AWG by tracing a long history of capitalist worldy connectivities and environmental change.

Scholarship often highlights how the discourse of colonialism informs science fictional narratives, including post-apocalyptic ones.[47] Less acknowledged within literary studies is, however, the influence of traditional apocalyptic logic on colonialism. Before I proceed to outline this influence, a clarification: when I speak of traditional apocalyptic logic, I am not speaking of 'apocalypse' in the contemporary sense of 'catastrophe', a sense that instead continues to ground my discussions of contemporary post-apocalyptic (i.e. post-catastrophe) fictions. Rather, with *traditional* apocalyptic logic I am referring to a paradigm, epitomised by the biblical Apocalypse of John, in which 'apocalypse', in the etymological sense of '*apokalyptein*' (to unveil), entails the revelation of a utopian new

world at the end of history that makes sense of everything that happened before. It is in this sense that Avihu Zakai identifies the 'Apocalypse of the New World', namely, that European powers interpreted the 'discovery' of the New World in traditional apocalyptic terms.[48] This is perfectly exemplified in Columbus's words about his 'discovery': 'God made me the messenger of the new heaven and the new earth of which he spoke in the Apocalypse of St. John after having spoken of it through the mouth of Isaiah; and he showed me the spot where to find it'.[49] As Catherine Keller argues, in these words, '*Apokalyptein*, meaning etymologically "to unveil," that is, "to discover" in the sense of "to disclose," now functions as a self-fulfilling prophecy', a self-fulfilling prophecy that fuelled the genocidal and exploitative colonial project.[50] Columbus's eschatology, Keller notes, 'render[ed] the planet endlessly available to cartography, to conquest, to commodification', constructing nature 'as the new and ultimate "other", the recipient of the messianic aggressions of Progress', for 'When the new heaven and earth lies "before" in space rather than in a numinous spacetime, human control of space and what lies "in" it gains force'.[51] Although writing before the popularisation of the term Anthropocene, Keller traces the same genealogy that runs from the colonial origins of the capitalist world system to our present environmental crisis as the theoretical perspectives I discussed in the previous section. However, she adds an important further element to this genealogy: traditional apocalyptic logic. It is because of this connection between colonial and traditional apocalyptic logic that, I argue, post-apocalyptic fictions are well placed to trouble the AWG's understanding of the Anthropocene.

As I show elsewhere, the contemporary apocalyptic imagination in general, qua imagination of dystopian disasters rather than of utopian revelations, critiques traditional apocalyptic logic and its influence upon Western modernity.[52] However, the patterns of repetition I identify in some contemporary Anglophone post-apocalyptic fictions specifically subvert the teleological movement from old to new worlds that is at the core of traditional apocalyptic logic's complicity with colonialism. These patterns also complicate the linearity of the Anthropocene's history in line with Whyte's and Davis and Todd's points about the epoch's recursive temporality to highlight its long history of imperialist practices of capitalist exploitation. There are two main ways in which the patterns of repetition are articulated and which I consider in turn: first, transhistorical plots that trace the origins of the narratives' post-apocalyptic futures back to colonialism, such as Mitchell's *Cloud Atlas* and Winterson's *The Stone Gods*; secondly, plots that draw explicit parallels between the violence of colonialism and that of the climate breakdown, such as Sanders's 'When This World is All on Fire' and Dimaline's *The Marrow Thieves*.

Critics often emphasise how Mitchell's fiction is essentially concerned with contemporary global interconnectedness.[53] Yet, what is significant about *Cloud Atlas* is that this contemporary global interconnectedness is explored within a transhistorical plot that spans several centuries, from the nineteenth-century colonialism that is the subject of the first narrative to the distant

post-apocalyptic future of the sixth, thus indicating how the roots of today's globalised world and of its projected environmentally degraded future lie in the colonial era. As Mitchell explains, the recursion of Nietzsche's will to power across the novel's six narratives has environmental relevance:

> Nietzsche identified a drive in the human psyche to exercise power over others, at whatever cost […] I decided to write the novel as a chain of plot-and-character studies about how individuals prey on individuals, corporations on employees, tribes on tribes, majorities on minorities, and how present generations 'eat' the sustenance of future generations.[54]

This pattern of repetition chimes with Davis and Todd's use of the image of the slinky to make tangible the reverberations of the impact of colonialism throughout the Anthropocene, and troubles the linearity of the Anthropocene's implicit conception of history as well as that of traditional apocalyptic logic.[55] *Cloud Atlas*'s structure only reinforces this pattern of repetition and its critique of linearity, for 'each narrative is "eaten" by its successor and later "regurgitated" by the same', that is, in the first half of the text, the narratives follow a chronological order, culminating in the central post-apocalyptic section, in the second, the order is inverted.[56] Thus, the novel ends where it started, in the colonial era, signaling the centrality of this period to *Cloud Atlas*'s anthropogenic catastrophic trajectory.

In the first narrative, 'The Pacific Journal of Adam Ewing', we encounter the will-to-power pattern through the colonial discourse of the civilizing mission exemplified by preacher Horrox's sermon about 'Civilization's Ladder', namely, a racist hierarchy where the race on the highest step, the Anglo-Saxon, rules over those on the lower.[57] Horrox justifies this domination and exploitation in the name of progress: 'It is Progress that leads Humanity up the ladder towards the God-Head', he preaches, and his enslaved servants' free labour 'pa[ys] for the benefits of Progress'.[58] Mitchell, however, juxtaposes Horrox's sermon with Henry Goose's observation that 'of all the world's races, our love – or rather our *rapacity* – for treasures, gold, spices & dominion, oh most of all, sweet dominion, is the keenest, the hungriest, the most unscrupulous! This rapacity, yes, powers our Progress'.[59] This juxtaposition captures a power dynamic, Cheap Nature, that, alongside the Nature/Society binary, is constitutive of the Capitalocene's colonial origins according to Moore: entire populations were given only partial, if any, membership to humanity and were relegated to the realm of nature, in order to facilitate their exploitation and capital accumulation.[60] Thus, *Cloud Atlas* exposes a stratified understanding of humanity, rather than a general *anthropos*, as integral to the Anthropocene.

Cheap Nature is indeed central to the advanced Anthropocene depicted by *Cloud Atlas*'s fifth narrative, 'An Orison of Sonmi-451', where it has been extended to 'fabricants' expressly designed to be exploited. Sonmi-451, the

narrative's protagonist, is one of these fabricants and her 'name', a model and serial number, perfectly encapsulates how external to the realm of humanity she is designed to be. As the story unfolds, however, the distinction between human 'purebloods' and fabricants is revealed to be a racist construct, echoing those of the colonial era, this time supported by chemical manipulation, for it is the food that fabricants are fed, 'soap', that impedes their conscious development.[61] 'An Orison' is set in a near-future hyper-capitalist Korea – Nea So Copros – which is governed by a conflation of state and corporate power – corpocracy – and whose 'pureblood' citizens are defined first and foremost by their relationship with capitalism, so much so that they are called consumers. Similarly to Horrox's ladder, Nea So Copros's 'state Pyramid' rests on the fabricants, whose enslaved labour is again presented as a way to repay their oppressors, who in this case brought them into being through an 'Investment'.[62] However, Nea So Copros's 'state Pyramid' is far from stable, for the will to power propping up capitalist practices of exploitation from the colonial era onwards has had disastrous environmental consequences.

Nea So Copros is surrounded by deadlands, 'irradiated or toxic swathes' that cover most areas of the world and are inexorably advancing. These deadlands are the direct descendants of the environmental hazards produced by late twentieth-century global capital, which Mitchell explores in his third narrative, 'Half-Lives: The First Luisa Rey Mystery', through the unsound infrastructural project that is Seaboard Corporation's HYDRA nuclear power plant. In 'An Orison', deadlands are forcing 'the Consumer and Production Zones [namely, capital] to retrench, mile by mile', so much so that the previous centres of the capitalist world system, like the United States, have already turned into wastelands.[63] If, in Nea So Copros, the praxis of Cheap Nature is alive and well in terms of labour thanks to the enslaved fabricants, deadlands signal the approaching anthropogenic end of the remaining three Cheaps of energy, food and raw materials, as there seems to be less and less remaining Nature to appropriate and exploit. As a character of the following story, 'Sloosha's Crossin' an' Ev'rythin' After', set in a distant future, explains in his post-apocalyptic dialect looking back on the past world, '*more gear, more food, faster speeds, longer lifes, easier lifes, more power, yay. Now the Hole World is big but it weren't big 'nuff for that hunger*'.[64] To return to Mitchell's image about the environmental effects of the will to power, past generations have ended up eating the sustenance of future generations, and the Hawaiian hunter-gatherer society of 'Sloosha's Crossin'' appears to be one of the last remaining pockets of human civilization in the world.

Winterson's *The Stone Gods* takes us on a similar transhistorical journey from the colonial foundations of global capital to its anthropogenic cataclysmic end as *Cloud Atlas*. Winterson's plot, however, more directly addresses the influences of traditional apocalyptic logic upon colonialism by undermining the very notion of a *new* world through a history of the Anthropocene that is aligned with Whyte's sense of a cyclical repetition of colonial and environmental injustice. Across four narratives and different planets, Winterson

depicts anthropogenic cyclical environmental breakdowns and the equally cyclical urge for apocalyptic new worlds and beginnings that soon translates into another cycle of colonial-capitalist exploitation.

The first narrative, 'Planet Blue', seemingly takes place in the future on the dying planet of Orbus, which appears to have found the chance for a new beginning in the colonisation of Planet Blue – I write 'seemingly takes place in the future' as it later transpires that Orbus is the planet humankind has colonised before Earth, which is nothing else than Planet Blue itself. Just like *Cloud Atlas*'s Nea So Copros, Orbus's Central Power is a corporate state run by MORE Corporation, whose apt name embodies the unquenchable hunger for economic growth and profit at the heart of capitalism. Facing the approaching anthropogenic end of human life on Orbus at the hands of this hunger – 'we [have] destabilised the planet [...] in the name of progress and economic growth', the narrative's protagonist muses – MORE advertises Planet Blue to the population as a 'Chance of a lifetime – new start – brave new world – wipe the slate clean'.[65] Yet, the dream of this new world in space is not new at all but, rather, repeats the colonial era, as signified by one of the refrains of the novel, which mirror and enhance *The Stone Gods*' cosmic cycle of self-destruction: '*The new world – El Dorado, Atlantis, the Gold Coast, Newfoundland, Plymouth Rock, Rapanaui* [sic]*, Utopia, Planet Blue*'.[66] This refrain complicates the possibility of a radical new beginning at the core of traditional apocalyptic logic, suggesting that the apocalyptic and 'utopian desire for a complete break from history and thus a more "pure" beginning [...] always requires a forgetting or repression of the material conditions (and mistakes) of the past', in this case, the colonial past.[67]

Indeed, the conquest of the new world of Planet Blue perpetuates the imbrication of colonialism and capitalism, embodied by the praxis of Cheap Nature, which is bringing the old world of Orbus to an anthropogenic end. MORE's secret plan is only to transport the rich to Planet Blue, leaving the poor to die on the soon-to-be-uninhabitable Orbus, with the exception of those poor whose cheap labour will power the new society. The whole of Planet Blue is conceived as Cheap Nature to be mastered and exploited. Before MORE's plan can be put into action, the dinosaurs that make Planet Blue inhospitable for human life need to be annihilated. Thus, a spaceship is tasked with causing an asteroid's collision with Planet Blue, which will indirectly kill the dinosaurs through a duststorm. This ecocide reproduces colonial dynamics that constructed the lands of the New World as 'unused, underused or empty – areas of rational deficit': Planet Blue's 'monsters' can be annihilated and its resources exploited because the planet is conceived as an area of 'rational deficit' that needs to be dominated in order to yield profit.[68] The mission, however, fails, as the asteroid triggers an ice age that makes MORE's further colonisation of the planet impossible. Tellingly, upon realising this, the spaceship's captain wishes for another new chance, which is in keeping with *The Stone Gods*' cyclical history of anthropogenic catastrophes and humankind's desire for apocalyptic new worlds and beginnings.

Planet Blue 'isn't new at all but a memory of a new world' also because humankind has already deployed space colonisation to address previous environmental breakdowns.[69] On their way to Planet Blue, the spaceship discovers Planet White, a once 'living, breathing, working planet, with water and resources, cooked to cinders by [the] CO_2' produced by a technologically-advanced civilization that 'couldn't control their gases'.[70] The captain believes that 'life on Orbus began as escaping life from the white planet', whose history 'looks more and more like ours'.[71] The captain is referring to Orbus, but Winterson's implication is that Planet White's history resembles Earth's too, as *The Stone Gods*' ensuing narratives make clear.

'Easter Island', the second narrative, is set on the eponymous island in the eighteenth century. The protagonist is a sailor left behind by Captain Cook, whose journals constitute another one of The Stone Gods' refrains, further alluding to the centrality of the colonial era to the novel's anthropogenic catastrophes. He witnesses the moment in which the very last tree on the island is cut. Easter Island's titular stone gods come to stand for *The Stone Gods*' cycle of environmental breakdowns in that 'an island abundant in all things necessary has been levelled to this wasteland through the making of a Stone God'.[72] Upon this realisation, the narrative's protagonist concludes that 'Mankind […] cannot keep to any purpose for much length of time, except the purpose of destroying himself'.[73] Fast forward a few centuries and we indeed find ourselves amidst the nuclear and environmental devastation of a Post-3 War Earth, the setting of the novel's concluding two narratives. Signaling humanity's repetition of the same mistakes across the ages and planets, we encounter another incarnation of MORE Corporation. From the environmentally damaging 'MORE is MORE' of rampant consumerism and the 'economics of greed', MORE is now trying to reinvent itself as the spearhead of the 'economics of purpose', a renting economy in which consumers become 'modest and eco-conscious members of a new world order'.[74] This 'new world order', however, is nothing else than the rehash of old colonial-capitalist dynamics. As Whyte reminds us, 'lowering emissions [or other similar 'green' strategies] without addressing colonialism can be highly problematic', precisely because these strategies do not tackle the root of our anthropogenic problems.[75] Thus, a character predicts, 'The West will race ahead – we are the new clean green machine, and the developing world will stay the way we wanted it to stay – raw materials and cheap labour', in other words, Cheap Nature, at least until there are 'raw materials and cheap labour' to appropriate and exploit.[76]

Where Mitchell's and Winterson's transhistorical plots trace a long history of the Anthropocene rooted in colonial dynamics, Sanders and Dimaline directly address the issue of climate justice by exploring the impact of anthropogenic climate breakdown upon Indigenous peoples as repetition of colonial violence. 'When This World Is All on Fire' is set in an America that is 'running out of places for people to be', for 'everybody either had too much water or not enough'.[77] And, as the titular song asks, 'Oh, when this world is all on fire/Where you gonna go?'.[78] The answer, it seems, is to Native

American lands, or, 'the little bit [they]'ve got left'.[79] The story's protagonist, Davis, is indeed a sergeant of the Cherokee Nation tasked with removing the influx of white squatters on reservation land. A telling dialogue between Davis and a family of these squatters frames how Sanders sees the encounter, and the broader threat to Indigenous sovereignty it represents, as a continuation of colonial violence: '"Oh, why can't you leave us alone? We're not hurting anybody. You people have all this land, why won't you share it?" We tried that, lady, Davis thought, and look where it got us'.[80] Haunted by the beautiful voice of the teenage daughter of this family, whom he hears singing the titular song, Davis feels compelled to try and help her after the eviction but, in return, he is racially abused and falsely accused of sexual harassment. By the end of the story, the reservation has been ravaged by a fire that, it soon turns out, was started by the squatters, who would rather see the world all on fire than in the hands of people they consider 'wood niggers, hogging good land while white people starve'.[81] Sanders thus exposes the intersection between settler colonialism, racialised understandings of humanity, and climate injustice underlying the Anthropocene.

The Marrow Thieves takes place in a near future North America that is doubly apocalyptic. On the one hand, climate breakdown: the Great Lakes are 'polluted to muck', California '[has been] swallowed back by the ocean', and 'The Melt [has] put most of the northlands under water', while the rest of the continent is experiencing 'building tsunamis, spinning tornados, crumbling earthquakes', as well as toxic spills from burst pipelines.[82] On the other, a mental health emergency: the survivors are made to work longer and harder 'under the whips of a schedule made for a population twice its size and inflated by the need to rebuild', so much so that they 'g[et] sicker, this time in the head. They sto[p] dreaming' and die.[83] These two crises are intertwined: both are a product of a necrogenic capitalist system, both see the Indigenous population bearing the brunt of the emergency.[84] The 'Story' rituals performed by Miig, the leader of the group of Indigenous survivors *The Marrow Thieves* focusses on, are the moments in which the relationship between colonialism, capitalism, and the Anthropocene comes into sharp focus. Seeking to transmit his knowledge of history to the group's youngsters, for only armed with this knowledge will they be able to fight the oppressors and survive, Miig situates the commodification of Indigenous people as treatment for the dreamlessness epidemic in the context of colonial-capitalist modernity.

Story begins with the violence of the colonial encounter:

> Anishnaabe people, us, lived on these lands for a thousand of years. […] We welcomed visitors, who renamed the land Canada. Sometimes things got real between us and the newcomers. Sometimes we killed each other. We were great fighters – warriors, we called ourselves and each other – and we knew these lands, so we kicked a lot of ass. […] But we lost a lot. Mostly because we got sick with new germs. And then when we were on our knees

> with fever and pukes, they decided they liked us there, on our knees.[85]

Story then pauses on other pivotal moments of colonial-capitalist oppression in the historical continuum that goes from the Columbian exchange to the anthropogenic environmental crisis. Firstly, the emergence of the Canadian residential school system, aimed at eradicating Indigenous culture and thus the possibility of resistance.[86] The schools of the titular marrow thieves, who siphon the dreams out of Indigenous peoples' marrows in an attempt to cure the dreamlessness that is killing the white population, are based upon this original system. The return of the schools not only represents a colonial déjà-vu, to go back to White's points, but once again makes tangible the dynamic of Cheap Nature: the bodies of the colonised, reduced to tubes of liquid dreams, literally power the capitalist machine as, without dreams, people 'kil[l] themselves and others and, even worse for the new order, refus[e] to work at all'.[87] Secondly, Story details the Water Wars and the Melt, which highlight how anthropogenic climate change disproportionately affects populations already made vulnerable by colonialism. Both the Water Wars, in which, Miig explains, 'America reached up and started sipping on our lakes with a great metal straw', and the Melt, which 'put most of the northlands under water', replicate a long history of colonial displacement and land dispossession which continues to affect Indigenous peoples today.[88] 'We were moved off lands that were deemed "necessary" to that government, same way they took reserve land during wartime', Miig recounts, 'there were no negotiations. We were just pushed off. The new migration from the coastlines [caused by climate breakdown] was changing geography daily' and Indigenous lands are once again seen as Cheap Nature to be appropriated and exploited for the profits of 'water companies and wealthy corporate investors', as well as for the comfort of the 'valued, wealthy community members'.[89]

Crucially, *The Marrow Thieves* positions itself against what Whyte identifies as problematic 'narratives of *finality* and *last-ness* that […] assume that Indigenous peoples are communities who over time have been gradually deteriorating to the point that today's climate and environmental crises of the Anthropocene threaten to kill them off permanently'.[90] Dimaline's novel stresses how alongside the déjà-vu of colonial violence, climate breakdown also sees the repetition of Indigenous resilience and survival. As one of the characters puts it, 'We have the knowledge, kept through the first round of these blasted schools, from before that, when these visitors first made their way over here like angry children showing tantrums. When we heal our land, we are healed also. […] We'll get there'.[91]

Miig's Story rituals emphasise how, to draw on Lidia Yuknavitch's *The Book of Joan* (2017), another novel belonging to the strand of contemporary Anglophone post-apocalyptic fiction discussed in this article, 'Stories save lives. They give shape to action'.[92] The patterns of repetition articulated in

these texts often serve not just to trace a long history of capitalist global connectivities and related environmental disasters but also to stress the potential of stories to foster agency and change. *Cloud Atlas*'s structure, for instance, hinges on a narrative's character reading/watching the chronologically preceding narrative and the whole novel is arguably informed by the principle that, to put it with Mitchell's post-apocalyptic dialect, 'pretendin' [i.e. storytelling] can bend bein''.[93] *The Stone Gods* equally features repeated acts of reading and writing, conveying the belief that narratives, having saved humankind 'not once, but many times', can help shape a sustainable future.[94] Advocating for the Orbis hypothesis, Lewis and Maslin remind us that 'The event or date chosen as the inception of the Anthropocene will affect the stories people construct about the ongoing development of human societies'.[95] If the AWG's proposal of locating the beginning of the Anthropocene in mid-twentieth-century globalisation is formalised, it will be even more crucial to tell stories, like the ones considered in this article, that foreground the continuing legacies of colonial practices of capitalist exploitation in the racial politics of the Anthropocene.

Notes

[1] Dimaline, *The Marrow Thieves*, 22.
[2] Sanders, "When This World," 152.
[3] Further examples of this strand of contemporary post-apocalyptic fiction include David Mitchell's *Cloud Atlas* (2004), Jeanette Winterson's *The Stone Gods* (2007) – both of which I consider in this article – Mitchell's *The Bone Clocks* (2014), Lidia Yuknavitch's *The Book of Joan* (2017), *Refugees* (2004) by Celu Amberstone (Cherokee), and Orson Scott Card's *Pastwatch: The Redemption of Christopher Columbus* (1997) – on the latter see Wolf-Meyer, *Theory*.
[4] Schneider-Mayerson, "Whose Odds," 957.
[5] Whyte, "Indigenous Science (Fiction)," 226.
[6] Yusoff, *A Billion*, xiii.
[7] Zalasiewicz *et al.*, "A General Introduction," 2. For a history of the term 'Anthropocene', including its pre-2000 occurrences, see Grinevald *et al.*, "History," 4-11.
[8] Zalasiewicz *et al.*, "A General Introduction," 2.
[9] The AWG's most comprehensive publication to date, upon which I am drawing in this section, is Zalasiewicz *et al.*, *The Anthropocene*.
[10] Grinevald *et al.*, "History," 10. This recommendation was also reaffirmed through a binding vote of the AWG in May 2019 – see Subramanian, "Anthropocene Now."
[11] Lewis and Maslin, "Defining the Anthropocene," 172.
[12] Grinevald *et al.*, "History," 10.
[13] Lewis and Maslin, "Defining the Anthropocene," 176.
[14] Steffen, "Mid-20th-Century 'Great Acceleration'," 254 (emphasis mine).
[15] Ibid., 255.
[16] McNeill, "The Industrial Revolution," 253.
[17] Davis and Todd, "On the Importance;" Lewis and Maslin, "Defining the Anthropocene;" Moore, "The Capitalocene, Part I."
[18] Crosby, *The Columbian Exchange*.
[19] This recalibration of our understanding of globalisation as a process rooted in the exploitations of the colonial era is in line with world-system analysis, which Jason W. Moore, one of the main scholars I consider in this section, also draws upon. Cf. Wallerstein, *World-System Analysis*, x: 'proponents of world-systems analysis . . . have been talking about globalisation since long before the word was invented – not, however, as something new but as something that has been basic to the modern world-system ever since it began in the [long] sixteenth century.' For another argument on how foundational colonialism was to the development and consolidation of a capitalist world system, see Anievas and Nişancıoğlu, *How the West*, chapter five.
[20] Moore, "The Capitalocene, Part I."

[21] Crutzen and Stoermer, "The Anthropocene;" Moore, "The Capitalocene, Part I," 596.
[22] Ibid.
[23] Ibid., 620.
[24] Moore "The Capitalocene, Part II," 244.
[25] Lewis and Maslin, "Defining the Anthropocene," 175.
[26] Ibid.
[27] Ibid., 177.
[28] Wagreich *et al.*, "Pre-Industrial Revolution Start Dates," 250.
[29] Malm and Hornborg, "The Geology of Mankind?" Parenti, *Tropics of Chaos*; Timmons and Parks, *A Climate of Injustice*; Whyte, "The Dakota Access Pipeline."
[30] Yusoff, *A Billion*, xii, xiii.
[31] Schneider-Mayerson, "Whose Odds," 946–947.
[32] Bachram, "Climate Fraud."
[33] On the Dakota Access Pipeline, and the movement against it, see, for instance, Whyte, "The Dakota Access Pipeline."
[34] Simmons, "Reorientations," 178.
[35] Davis and Todd, "On the Importance," 763, 769 (emphasis in original).
[36] Moore, "The Capitalocene, Part I," 596 -597.
[37] Moore, "The Capitalocene, Part II," 237 (emphasis in original).
[38] Hartley, "Against the Anthropocene."
[39] Whyte, "Indigenous Science (Fiction)," 225.
[40] Whyte, "Is It Colonial Déjà-Vu?," 5.
[41] Yusoff, *A Billion*, xiii.
[42] Whyte, "Is It Colonial Déjà-Vu?," 16.
[43] Davis and Todd, "On the Importance," 771-772.
[44] Whyte, "Indigenous Science (Fiction)," 224.
[45] Johns-Putra, "Climate Change in Literature," 267. For other surveys of climate change fiction, see Trexler, *Anthropocene Fiction*, and Trexler and Johns-Putra, "Climate Change in Literature."
[46] Schneider-Mayerson, "Whose Odds," 945. For a similar critique of popular culture, specifically films, see Gergan, Smith and Vasudevan, "Earth beyond Repair."
[47] Grewell, "Colonizing the Universe;" Kerslake, *Science Fiction and Empire*; Rieder, *Colonialism and the Emergence*.
[48] Zakai, *Exile and Kingdom*.
[49] Ibid., 85.
[50] Keller, "The Breast," 65.
[51] Keller, *Apocalypse Now and Then*, 153, 165, 159.
[52] De Cristofaro, *The Contemporary Post-Apocalyptic Novel*. This book also features more detailed analyses of some of the texts discussed in this article, including *Jamestown*, on which I open, and *The Book of Joan*, on which I close, both of which I can only briefly mention in the space of a single article.
[53] Shoene, *The Cosmopolitan Novel*, 97-124; Shaw, *Cosmopolitanism*, 27-66.
[54] Mitchell, "Genesis."
[55] See De Cristofaro, *The Contemporary Post-Apocalyptic Novel*, chapter three, for an argument about *Cloud Atlas*'s structural critique of traditional apocalyptic logic. My analysis of the novel's structure as a concertina frames the same temporal movement of recursion, expansion, and contraction as Davis and Todd's slinky.
[56] Mitchell, "Genesis."
[57] Mitchell, *Cloud Atlas*, 506-7.
[58] Ibid., 506, 510.
[59] Ibid., 508-9 (emphasis in original).
[60] Moore, "The Capitalocene, Part I," 600.
[61] Mitchell, *Cloud Atlas*, 191.
[62] Ibid., 342, 190.
[63] Ibid., 215.
[64] Ibid., 286 (italics in original).
[65] Winterson, *The Stone Gods*, 38, 55.
[66] Ibid., 8, 94, 150, 238 (italics in original).
[67] Jennings, "'A repeating world'," 133.
[68] Plumwood, "Decolonising Relationships with Nature," 63; Winterson, *The Stone Gods*, 4.
[69] Winterson, *The Stone Gods*, 105.
[70] Ibid., 67.
[71] Ibid., 68.
[72] Ibid., 133.
[73] Ibid., 132.
[74] Ibid., 164-165.
[75] Whyte, "Is It Colonial Déjà-Vu?," 12.
[76] Winterson, *The Stone Gods*, 197.
[77] Sanders, "When This World," 152.
[78] Ibid., 155.
[79] Ibid., 152.
[80] Ibid., 156.
[81] Ibid., 157.
[82] Dimaline, *The Marrow Thieves*, 35-36, 100.
[83] Ibid., 101.
[84] On the Capitalocene as Necrocene, see McBrien, "Accumulating Extinction."
[85] Dimaline, *The Marrow Thieves*, 34.
[86] On the residential school system, see Fontaine and Craft, *A Knock*.
[87] Dimaline, *The Marrow Thieves*, 101.
[88] Ibid., 35-36.
[89] Ibid., 101-102.

[90] Whyte, "Indigenous Science (Fiction)," 236 (emphasis in original).
[91] Dimaline, *The Marrow Thieves*, 208.
[92] Yuknavitch, *The Book of Joan*, 163. This novel is partly set on a suborbital complex that is home to a rich elite who precariously sustain themselves by siphoning the scarce Cheap Nature of Earth, now a scorched ball of dust, and partly in the Alberta Tar Sands, another site in which capital's oil addiction entails displacement and dispossession for Indigenous peoples alongside environmental hazards.
[93] Mitchell, *Cloud Atlas*, 297. Cf. De Cristofaro, *The Contemporary Post-Apocalyptic Novel*, 117-119.
[94] Winterson, *The Stone Gods*, 95. Cf. De Cristofaro, *The Contemporary Post-Apocalyptic Novel*, 127-130.
[95] Lewis and Maslin, "Defining the Anthropocene," 178.

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