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Cli-fi: The impact of the climate emergency on 21st Century fiction.

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Contents

1.Abstract

This research supports a new movement in contemporary literature: cli-fi. The term has been attributed to environmental dystopias as far back as the nineteen-sixties. In the 21st Century, many writers are imagining life during or after severe changes to Earth's climate. While science fiction, speculative fiction and dystopia are the lending genres exploring effects of climate change, the climate emergency has started to pervade contemporary fiction.

The first half of this thesis explores Atwood's *MaddAddam* trilogy. The trilogy is the focus in this thesis because it considers how humans will react to catastrophic climate change in the greatest depth. *MaddAddam* is a cornerstone of the cli-fi movement, a journey into a possible future in which human life reaches its penultimate chapter. Atwood's trilogy proves that, when writing in the era of climate emergency, the threat of the changing climate can become a writer's most evocative subject.

The second part of this thesis explores cli-fi in the UK, focusing on Ben Smith's *Doggerland* and Sarah Hall's *The Carhullan Army*. The finding in these British novels was that setting is thrust more into the spotlight, whereas in American Literature, tropes such as Malthusian biological terrorism and religious extremism are more prominent. British writers seem concerned with political structures and resistance, whereas North American writers challenge more the ideologies which hold up political structures: religion, capitalism and consumerism, the dependence on fossil fuels. While cli-fi on both sides of the Atlantic has an interesting relationship with history and reflection, the British novels seem more philosophical: both aspects of cli-fi provoke stern self-examination in the reader.

Finally, there is a section from the *Wyke*, the creative writing project undertaken alongside this research. The aim was to write a novel which could be considered popular by a mainstream readership.

2. Thesis

Introduction

Many scientists and critics refer to the last 60 years as the Anthropocene (Crutzen, Stoermer, 2013), 'the currently still informal term for the epoch in which largely unplanned human impacts on the planet's basic ecological systems have passed a dangerous, if imponderable, threshold' (Clark, 2015). This is an important term because '*Anthropocene* productively shifts the emphasis from individual thoughts, beliefs, and choices to a human process that has occurred across distinct social groups, countries, economies, and generations: the wholesale emission of fossil fuels that began in the Victorian period and has intensified through the present day' (Trexler, 2015). Before the Anthropocene, was the Holocene, going back to 10,000 BC. It is regarded as a period of life-supporting stability in the Earth's climate and atmospheric conditions (Waggoner, 1996). Therefore, authors in the 21st Century are writing in a relatively new geological epoch: a world in which the environmental and atmospheric conditions are undergoing severe change due to human actions. The role of the writer in the 21st Century has not changed much form that of the cave-painters of the Holocene: writers must continue to thrill, distract, and philosophise, while offering wisdom, pleasure, and hope. However, the movement from the Holocene to the Anthropocene, the contemporary climate emergency, and growing awareness of dramatic environmental and weather changes, has certainly stimulated writers in the 21st Century to approach aspects of their craft in a different way.

'Cli-fi' was coined as a term by the activist Daniel Bloom (Goodbody, Johns-Putra, 2019), and at first, critics only thought it delineated climate change fiction, or eco fiction, as a sub-genre of science fiction, with origins dating back to around the 1960s and 70s, in works of writers like J. G. Ballard, Frank Herbert, and Ursula K. Le Guin. This movement in contemporary fiction is best thought of as 'literature and film, reflecting but also to a degree informing views and shaping conversations on climate change' (Goodbody, Johns-Putra, 2019). The climate emergency of the 21st Century has caused the development of climate change as a theme in numerous novels, and despite Adam Trexler's claim that the journalistic press was 'not diagnosing a wider movement' in his 2015 book *Anthropocene Fictions – The novel in a Time of Climate Change*, this thesis argues that a discernible movement has developed since the year 2000, which is now acknowledged by all: in fact, inspiration for this very project

developed from a conversation with the proprietor of Abbey Books, on the *Rive Gauche* of Paris in 2018. Amritav Ghosh wrote in *The Great Derangement: Climate Change and the Unthinkable*, 'if the urgency of a subject were indeed a criterion for its seriousness, then, considering what climate change actually portends for the future of the earth, it should surely follow that this should be the principal preoccupation of writers the world over' (2016). As Ghosh hoped, climate change is becoming a preoccupation for authors.

This new movement tends to lead writers towards dystopian visions, probably due to the range of opinions published in much non-fiction as to how dire the consequences of climate change could be. Cli-fi is often dystopian in nature and often fits into the 'three main, if often interrelated, forms of the concept: the political dystopia; the environmental dystopia; and finally, the technological dystopia' (Claeys, 2017). It is due to its diversity that cli-fi as a movement, as Ghosh claimed, was not 'taken seriously by serious literary journals' (2016). The bibliography of this thesis now proves otherwise: it is becoming clear that writers are exploring climate change more, therefore placing cli-fi at the forefront of public and critical debate. With the growing use of the term Anthropocene, 'in the midst of a historical process of fossil fuel consumption that began before our parents and will continue long after us.' (Trexler, 2015), literature is contributing to and often shaping conversations as the climate continues to change. Anthropocene authors seem to feel a responsibility to publicise burgeoning scientific ideas, as Jules Verne did with the Nautilus, and raise public awareness of new technologies, or different ways of living. These are, however, often undermined by publications which give voice to those who deny what is now broadly accepted as scientific fact: the global climate is warming. With record temperatures and lowest annual rainfalls being broadcast ever more frequently, readers may feel as if they are living in an environmental dystopia: this, in the UK at least, is leading to a hunger for realism in cli-fi. Authors in the 21st Century are imagining worlds which seem uncannily close to reality, facing a climate emergency, but with forecasted environmental degradation and satirised political conditions (Wallace-Wells, 2019). As Rabelais criticised out-dated scholarship and dogmatic religion in *La Vie de Gargantua et Pantagruel* (1532-65), or Dickens inequality in *Oliver Twist* (1837-39), Orwell politics in *Nineteen Eighty-Four* (1949), Atwood women's rights in *The Handmaids Tale* (1985), Pratchett capitalism, with his Vimes

Boot Theory, in *Men at Arms* (1993), authors of the cli-fi movement are forcing readers to realise the biggest problem facing the world.

Cli-fi writers imagine life after a climate disaster event: an event which causes life on Earth to change irrevocably, such as an ice age or meteor strike. Engendering hope can be either a goal of a writer in the climate emergency, or from a nihilistic viewpoint hope can be deliberately undermined. Opposition to hope is unsurprising, given the lack of global reaction and the fact that many intellectuals are beginning to believe an open conspiracy that 'the rich and powerful' are allowing 'catastrophes so that they can exploit' them (Klein, 2007). It's hard to argue that the rich don't benefit from disaster when reading about the NHS Track and Trace app, or PPE (Conn, 2021). Or, how oil giants like BP and Shell have spent billions lobbying governments, for years, to promote the use of fossil fuels (Abnett, 2021), despite ministers from countries who profit most from oil, Iraq for example, openly begging for more sensible investment in renewable and sustainable energy sources (Allawi & Birol, 2021). Still, in cli-fi, even if tipping points are passed and landscapes are irreversibly changed by flooding, erosion, superstorms, fires, or drought: characters can cooperate, adapt, and continue living, even without dialectical opposition, or in other words opposing forces that destroy nature in the name of profit. As explored in further discussion of Atwood's *MaddAddam Trilogy,* characters can do the unthinkable and completely sabotage corporate or political dominance from within. However, most frequently, characters are projected into futures depicting extreme political dystopias, which are probably logical progressions from regimes of the 20th and 21st Centuries. The fictional politics typically become brutally authoritarian, as resources are so scarce that imagined future states must conquer or be conquered: brutality in carrying out political change is historic in revolutionary circumstances such as in *la Terreur* after the French Revolution, or with the murder of the Romanovs during the Russian Revolution. However, the role of the cli-fi writer is not necessarily to write a post-disaster manifesto, though such a thing may become necessary. Writers seek to produce something more thrilling, but something that readers can still recognise and relate to; this is why aspects of cli-fi writing draw ever nearer to literary realism.

A world plunging deeper into climate emergency is extremely frightening for readers. Therefore, settings are key in making readers realise catastrophe. Fear is important in the cli-fi movement: from their comfortable armchairs, readers explore fear's limits and unravel evil, as the emotion is now highly relevant in discussions about climate and environment (Rae and Wilson, 2022). A temptation for writers in the cli-fi movement is to depict a prophetic future, which may become increasingly less difficult, with the ever-increasing detail in projections such as David Wallis-Wells's *The Uninhabitable Earth: A Story of the Future* (2019). Some could, based on the findings of critics such as Gregory Claeys, argue that there are only so many ways authors can explore a climate dystopia or the effects of climate disaster, (drought, famine, flood, any and all leading to the devolution of civilisation) but one example of something that disproves this is Robert Harris's *The Second Sleep* (2019), which cleverly tricks readers into thinking they are reading historical fiction, before gradually revealing details which expose the true timeline and setting in the 'neomedieval' future (Spiegel, 2010). The imaginations of creatives in the 21st Century are changing as information about the extent of the climate crisis is now piling up. The success or failure of environmental and sustainable science, bio- and geoengineering, will prove concepts of the imagination possible, or impossible, as the 21st Century progresses: this stimulates the grail-like temptation of predicting the future, the hope of imagining a something that could make a positive difference. However, the nihilistic writers seem yet to explore the concept of termination shock for example: this could occur if extreme efforts to prevent the effects of global warming (such as surrounding Earth with orbital mirrors) failed, resulting in a rapid and fatal rise in temperatures (Parker and Irving, 2018). Still, both non-fiction and fiction writers alike are fervently forecasting the potential climate disasters, and as Adam Trexler puts it: 'it can be said without exaggeration that the underlying causes of the Anthropocene have altered the horizon of human activity, as well as the capacities of the novel' (Trexler, 2015). As proven by history: if the world or humanity changes, materially, spiritually, economically, philosophically, politically, or socially, human imagination changes accordingly. Take, for example, wildfires in Yorkshire and Canada: they were hard to imagine at such latitudes, before they happened.

It is a fair assumption that originality could dwindle as cli-fi becomes more aligned with scientific prediction. However, unlike non-fiction, literature can make

disasters amusing. In the 21st Century, the planet is being changed, without consideration of consequence, or in some quarters, utter denial, thus: in cli-fi 'realist depictions of everyday life involuntarily become biting satire' (Trexler, 2015. For something to be amusing, it must be enough of a violation not to be considered boring, yet benign enough not to be considered offensive (McGraw, Warren, 2010). Benignity can be the result of relative distance. The climate emergency, despite its name, is held at an unconquerable distance for readers who face 'a trade-off between short-term and long-term benefits, which is the hardest trade-off for people to make' (Markman, 2018), readers who have not experienced a disaster event yet, and poke fun at climate change by pointing out how the weather in certain places will continue to improve. In cli-fi, the climate emergency is made more benign as readers experience its conclusion in fiction, rather than reality. Time proximity also makes violations more benign: the worst impacts of climate change are possibly decades away from readers of contemporary fiction, as are the events of cli-fi. The irony and satire, poking fun at the 'chronic sense of environmental doom' many contemporary readers feel (Rae and Wilson, 2022), is what gives an edge to cli-fi: when writers like Atwood declare their fiction to be speculation about potential futures, and invent whacky science and amusing scenarios, questions arise as to how prophetic cli-fi novels could be, and the satire becomes even wittier, due to the balance of benignity and violation in discussing the most pressing global issue. Early victims of climate disaster may not feel enough detachment from cli-fi novels for them to be amusing: satirising disaster could become too much of a violation. Still, the right mix of benignity and violation can be found in 21st Century cli-fi for writers to make climate change, and therefore the cli-fi movement, somewhat comical. Therefore, joking about climate change, as Atwood does in the *MaddAddam* trilogy, becomes more benign than it is in reality.

The debate is split on recognising individual responsibility in the climate emergency, and there is still outright denial of climate change, usually spread on popular social media outlets (Fazackerly, 2023). However, people in developing countries or poor regions, recognise that they are experiencing early consequences of climate change, for example through flash-flooding, coastal erosion, or drought, and therefore recognise the individual responsibility of themselves and others, especially in more developed countries. Nevertheless, criticism of those who do not

feel individually responsible should be cautious, as fossil fuel companies theselves have been projecting the idea that individuals can make a difference, in forms of green-washing propaganda (Kaufman, 2020). Judging by collective actions and consumer behaviours, many readers feel no individual responsibility: they are driving around in cars, flying away on holidays, consuming meat twice a day and sending thousands of single use plastics to landfill. They would argue they have the right to do so. These actions will likely become more of a moral and social violation as the climate emergency becomes more physically measurable. The best literature entertains while also exposing the critical reader to stern self-examination, or 'the privileging of self-reflexivity over reference to the material world' (Trexler, 2015): this is where cli-fi hits hard. The growing popularity of cli-fi propagates self-examination, forcing reflection, so that habitual actions damaging the environment might be halted. A big part of what it means to live in the 21st Century, is what it means to impact the environment during one's lifetime, living in a world in which the climate, eco-systems, and habitats, are changing because of anthropocentric exceptionalism. Cli-fi forces readers to consider an essential question in modern human existence: should the individual human, or collective humanity, be prioritised over the natural world?

Additionally, literary heritage is influencing 21st Century writers who write cli-fi. From Shakespeare's *The Tempest,* throughout the Romantic period, Wells's technology and vegetarianism, Lawrence's realistic descriptions of diminishing countryside life set against the Industrial Revolution, Ballard's explorations of climate disaster in *The Drowned World* (1962) and *The Drought* (1964): threatening climates have been literary themes, droughts, floods, or hurricanes, motifs. Writers and readers have cherished and romanticised the natural world, and with it seeming ever-more finite, setting is highly important in this new literary movement, which begins to lament the destruction of sublime nature. Cli-fi must portray conceivable landscapes, contain relatable characters, communities, relationships, all influenced by a major climatic event, which begins in the readers' present: the climate emergency of the early Anthropocene. Whether set in the UK, on Earth, or elsewhere, the building or rebuilding of the worlds, is often key to success within the cli-fi movement. As Trexler puts it: 'Landscapes, animals, devices, vehicles, geological formations, and buildings are formally constructive entities in fiction. To

take an obvious example, the western as a genre doesn't work if cowboys lost in the desert can find a water fountain every few feet… In contemporary literature, melting ice caps, global climate models, rising sea levels, and tipping points have altered the formal possibilities of the novel.' (2015). Characters are at the mercy of setting, and therefore setting fills a large part of the narrative. Possibilities for setting are endless so it is true that 'No singular influence or unitary idea connects all climate fiction' (Trexler, 2015). Although, the power of nature within any setting must be absolute in all cli-fi: nothing in the novels can wield greater power than nature. The exploiters and destroyers of nature in cli-fi are almost always villains, although some villains are simply ignorant. Protagonists can contend with nature, to struggle with it, but to be considered truly good in cli-fi they require an acceptance of powerlessness, gratitude for nature's beauty and bounty, and a rejection of the urge to exploit it beyond their means: this is the key principle by which the cli-fi movement educates and influences.

The Maddaddam Trilogy

Part 1: *Oryx and Crake* – Margaret Atwood

One of the most evocative characters in 21st Century cli-fi is Snowman, or Jimmy, protagonist and narrator in *Oryx and Crake* (Atwood, 2003), the first novel of the *MaddAddam Trilogy*. Snowman and Jimmy are arguably two characters: Jimmy was a naïve person living in the world before 'the flood', Atwood's fictional disaster event, and Snowman is the narrator, *in medias res,* in the aftermath of near total extinction. By reflecting on the Jimmy's past from Snowman's present viewpoint, Atwood employs a clever narrative structure, as 'the futurist dystopia' (suffered by Jimmy in his youth) 'is already a memory' (Snyder, 2011): this is the first instance in this thesis highlighting creative use of history in cli-fi. Snowman's name is obviously symbolic: named after the ephemeral melting figure, to accentuate humanity's vulnerability in the face of the climate emergency. In the novel, the population has been wiped out by a deadly man-made virus, hidden by Jimmy's evil-genius ex-best friend, Glenn, nicknamed 'Crake' after an extinct bird in the imagined future; all of his fellow scientists working secretly within the 'Maddaddam' group take pseudonyms of extinct species and as such Atwood helps readers recognise the extremism of the group headed by Glenn, foreshadowing his role as environmental-terrorist. The virus, the metaphorical 'flood', is distributed in pills which are supposed to protect prostitutes and their clientele from venereal diseases, while boosting libido and sexual performance. Sex-work is recognised as real work in Atwood's imagined future, although it is an unregulated industry: this leads to a question around whether Atwood is making a challenge to the illegality of sex-work in the real world, or whether she is simply condemning the commodification of women's bodies altogether.

After 'the flood' (depicted in the prequel, *The Year of the Flood*) Snowman becomes the unwilling shepherd of genetically modified humanoids (bred in Glenn's laboratory): the importance of bioengineering and advanced biochemistry in the trilogy suggests that it is purely a technological dystopia, but this is not so. The so-called Crakers live off foliage and therefore have no requirement for agriculture: when 'the flood' is complete, there is no opposition between dialectical forces competing for land, food, or resources in the newly populated world. Atwood implies that intensive production for an ever-growing race of consumers is the reason for climate change: the birth of agriculture ten thousand years ago is also claimed by

many scientists to have been the event that brought about the Anthropocene (Ruddiman, 2003). A Malthusian wipe-out of humans is one of the 'handful of scenarios - desertification, extinction, polar adventure and flooding - that comprise the vast majority of climate fiction' (Trexler, 2015), and the disaster event could end in either more moderate climate change or rapid environmental degradation. Glenn spreads the virus to end a society 'Modelled in part on *Brave New World,* [which] projects the scenarios of corporate dictatorship, global warming and collapsing civilisation' (Claeys, 2017). The disaster event is foreshadowed by Atwood in *Oryx and Crake* (described by Atwood as a 'joke-filled fun-packed rollocking adventure' (MIT Video Productions, 2019)), when, as a child, Jimmy watches a bonfire of 'an enormous pile of cows and sheep and pigs' (Atwood, 2004, p. 18) in the compound in which he lives, owned by the company his father works for. This short scene is typical of a cli-fi novel's exposition: it is disturbing, and there are numerous sub-textual implications of the anthropocentric viewpoint. Firstly, the season 'could have been October, or else November' and Jimmy narrates how 'the leaves still turned colour then, and they were orange and red' (Atwood, 2004, p. 18) implying that a natural cycle has been disrupted in the present, creating a sense of foreboding. Secondly, the idea of a bonfire gives the illusion of control, but the bonfire could be symbolic of humanity's destructive power over nature. Fire and agriculture, are the things that scientists argue over, as to whether they brought about the Anthropocene, being shared causes of emissions due to rumination and combustion. This is not to mention how, in the 21st Century, the scene evokes disgust and fear, due to how a bonfire can spread into a wildfire, even for example in British Columbia, Canada (BBC, 2021).

The cause of bonfire is diseased animals, as Atwood implies in an anthropocentric conversation between Jimmy's father and another man, about how the security services should have protected not the animals themselves, but human food from. The scene also recalls television and press images of the result of the 2001 foot-and-mouth outbreak in the UK, another shocking image familiar to the British reader, a reminder of the failures of intensive farming, keeping animals in inhumane conditions. The fact that the bonfire burns animals, pitiable symbols of innocence, shows an exercise in man's destructive power yet further: these animals were destined to be killed and eaten, but here they have been wastefully killed,

martyred almost, leading to examination of the ethics behind farming animals in general. Human consumption of meat and dairy is a large contributor to the destruction of environments due to deforestation, to global emissions due to rumination, and thus the greenhouse effect: with such allusions to the anthropocentric maltreatment of other species, the novel moves the trilogy towards environmental dystopia, the category of dystopia the second and third novels unarguably fit better. The allusion to ecological terrorism, at this stage only indirectly affecting humans, foreshadows the later actions of Glenn through the Blisspluss pill. Atwood links environmental destruction to human impulses of hunger, or greed. Whether the hunger be for meat, money, or sex, it is allegorically all the same. Atwood would deny any allegory however, as concerning *MaddAddam* she said, “There is no message. Ha! Be nice to people... If you want to do a message rent a billboard and do an advertising campaign.” (Christie, 2013).

Research would suggest that Atwood has always denied any kind of allegorical intentions in her works, but in the very same interview as referenced above, she does concede, “Storytelling is a very old human skill that gives us an evolutionary advantage... If you can tell young people how you kill an emu, acted out in song or dance, or that Uncle George was eaten by a croc over there, don’t go there to swim, then those young people don’t have to find out by trial and error.” (Christie, 2013). Atwood acknowledges literature as a lens through which humans can observe and learn. The *MaddAddam Trilogy,* as a lens, is a kaleidoscope of moral and scientific dilemmas: it is a panoply of characters, events, and attitudes. The bonfire scene quoted above is one of the more straightforward that readers might relate to. Things become more and more varied and imaginative, for example: ‘Jimmy’s father… [is] a genographer, one of the best in the field.’ (Atwood, 2004, p.25), a character who works to help genetically engineer Pigoons, a porcine-human crossbreed, used to help cure disease through organ farming. The fictional creatures are bread with the goal of saving human life, but their offal still ends up as sausage meat. With the Crakers, the Pigoons, and other weird new species, Atwood’s dystopia ‘verges on being post-animal and post-human’ (Claeys, 2017). Nevertheless, Atwood insists she is a writer of speculative fiction, not science fiction. Gregory Claeys has labelled this ‘the Atwood principle’ (2017): that the difference between speculative fiction and science fiction is that the latter is ‘fiction in which

things happen that are not possible today' (Atwood, 2005), whereas speculative fiction 'does not include any technologies or biobeings that do not already exist, are not under construction, or are not possible in theory' (Atwood, 2014). Speculative fiction is a genre in which authors can explore the cli-fi movement, but it is worth remembering that the movement could be explored also in science fiction, dystopia (fiction depicting landscapes defined by ruin, death, destruction… cataclysm, war, lawlessness, disorder, pain, and suffering' (Claeys, 2017)), fantasy (fiction with magical or supernatural elements, not existing in the real world but sometimes juxtaposed, importantly in cli-fi, with real world settings), literary realism, and probably other genres. This is because it is a contemporary movement in literature, in the early stages of the Anthropocene: writers, like Atwood, are not experimenting with a new sub-genre, they are writing the climate emergency into contemporary fiction. In doing so, they are informing views within a wide readership.

To inform views, Atwood relies on science. Despite her claims that she is only interested in 'pop science' (MIT Video Productions, 2019), her writing contains complex moral and scientific dilemmas, and she insists that she is not against science, especially if it improves 'types of things' (MIT Video Productions, 2019). In terms of speculative scientific ideas, a Google search can prove that so-called lab-meat is already available in some supermarkets. Splicing human DNA is complex but within the realms of possibility (Blakemore, 2017). Many would argue that altering DNA at an embryonic level is immoral, not just on spiritual grounds: a semi-successful DNA splice could result in the birth of something forced to live in a horrendous state of suffering, or something that could destroy an eco-system by disrupting a food chain or become the carrier of a new disease. Atwood's Pigoons also have higher brain function than normal pigs, as human-like cerebellums are successfully introduced into the new species. From this implantation of an organ responsible for such a large part of human consciousness, Atwood expresses how animals may comprehend the torture done to them by humans. The notion of experimenting with human stem cells, or of creating human embryos with animal-spliced DNA, makes Atwood's trilogy a modern reinvention of *Frankenstein,* and evokes terrifying curiosity following the imagined experiments on the page, but always with a guilty sense of possibility, because 'cautionary tales of the future work by evoking an uncanny sense of the simultaneous familiarity and strangeness in

these brave new worlds' (Synder, 2011). The fictional organ farms for human transplants enable human beings to have many organs transplanted, including the skin, so that horrific burns victims can lead normal lives: one can reflect on this in a positive light. But the vain pursuits of immortality and eternal youth are ever-furthered and exploitation of the Pigoons becomes totally indiscrete. The quest for immortality and eternal youth is an entertainingly ironic trope when placed alongside the hastening degradation of climate and environment in the novel: it is impossible to live forever on an uninhabitable planet and the paradox is titillating.

The scientific dilemmas of the trilogy are inextricable from the moral dilemmas, which are reflected in key settings. A central moral dilemmas is the uneven distribution of wealth between gated compounds and over-populated metropolises. Set mainly in the United States, 'with high school drug problems, computer gaming, live executions on the internet, a euthanasia website, and pornography aplenty' (Claeys, 2017) the three books recount overlapping time periods. Jimmy spends his childhood in the ironically named OrganInc Farms, while other characters must fight for survival in over-populated mega-cities. Jimmy's ancestral homes were destroyed 'when the sea level rose so quickly' (Atwood, 2003, p.71). Cities become lawless, and populated areas outside corporate compounds become known as pleeblands, their inhabitants: the pleebs. The parts in-between are labelled the wastes, within the wastes, the nuclei of compounds: the workplaces and protected homes of employees of corporations such as Jimmy's father are centres of wealth and prosperity. The corporations are the governors of society and the arbiters of a biased system of law-and-order run by their security force, the CorpSeCorpse, hence Claeys observation of Huxleyan inspiration (2017). The eventual 'flood' is the cure for a dying planet, and it also renders the scourges of wealth and privilege obsolete. Atwood places emphasis on how capitalism (exaggerated by corporate dictatorship) is enemy to environmental and human preservation, thus civilisation is 'destroyed by neo-liberal ideological assaults' (Claeys, 2017). Trexler suggests, 'If climate change is an ancillary feature of these novels, it is because they are far more invested in bemoaning an economic hegemony they cannot escape' (2015). Furthermore, hegemony between genders is also alluded to through dissemination of the Blisspluss pill, unwittingly distributed by the innocent character, Oryx, firstly to female sex workers. Female sexual

exploitation is present in Atwood's dystopian future: Oryx is an exploited internet porn star, who Jimmy and Glenn fantasise about as teenagers. She is later discovered by the adult Glenn, and subsequently exploited in his masterplan, through her desire to do good. Her character pathway, from exploited underage sex-industry pawn, to pawn in another dastardly scheme, is harrowing, and certainly seems to predict that in the future women will continue to be exploited and scapegoated.

In the wake of the mass cull of humanity by means of a gruesome haemorrhagic virus, an engineered global pandemic, civilisation in *Oryx and Crake* becomes a wasteland from which there can be no return. Glenn highlights, 'All it takes is the elimination of one generation. One generation of anything. Beetles, trees, microbes, scientists, speakers of French, whatever. Break the link in time between one generation and the next, and it's game over forever" (Atwood, 2003, p.261/262). Many things could be added Glenn's list: monarchs, capitalists, middle managers, rhinos, polar bears, bees. The gaming term closing the above passage should not be ignored either, as it brings readers in the 21st Century to reflect on Generation Z, born after the year two thousand, comprised of more gamers than ever (Jovanovic, 2023). These young people will likely suffer worse consequences than Millenials or Boomers, and could be the generation to take drastic action, bringing Earth back from the brink of total despoilation. This responsibility can lead to anxiety due to an existential crisis, the philosophy of which is omnipresent in cli-fi and will be further explored later. Questions arise from this existential crisis, such as: will an attempt to save the planet from climate change give life meaning? Will life in a world already condemned to between three and five degrees Celsius of warming be worth living? Will any attempt to tackle the climate emergency be ultimately rendered obsolete by death? Some, like Glenn, overlook the fact that "When any civilisation is dust and ashes... art is all that's left over. Images, words, music. Imaginative structures. Meaning – human meaning, that is – is defined by them." (Atwood, 2003, p.197), as Jimmy rightly observes. Jimmy is a words person, 'not a numbers person' (Atwood, 2004, 29): Jimmy loses everything in 'the flood' but absurdly endures. This is a powerful message in the literary movement of the contemporary Anthropocene, one that readers and critics must recognise: important words, in literature, non-fiction, speeches, persuasion, manifestos, philosophies, are just as important as

numbers, such as those that speak of how two degrees of warming by 2050 spells catastrophe, as explored *Oryx and Crake*. If civilisation does end for reasons related directly or indirectly to climate change, it will because people in high places did not live up to their words in tackling the climate emergency, and books will be left over for people to read, maybe even manuals for survival.

Part Two: *The Year of the Flood* – Margaret Atwood

The Year of the Flood (Atwood, 2009), second novel of the *Maddaddam Trilogy,* is simultaneal to *Oryx and Crake.* It centres around three protagonists: Toby, Ren and Adam One. Toby becomes the main protagonist of the trilogy, as she overcomes more antagonism than any other character. She attended Jimmy's university, named after Modernist dancer, Martha Graham; a university of ill-repute within Atwood's imagined dystopian future, due to its promotion of the arts and creativity, as suggested by its matronymic. Reading in the Anthropocene, one is forced to reflect on one's own formal and cultural education and ponder the individual's capacity to prevent, even partially, the consequences of climate change, bringing a pathetic sense of powerlessness. The character link between Jimmy and Toby is another implicit defence of the arts, as neither protagonist turns out not to be a 'numbers person' (Atwood, 2003, p.66), but they do survive the disaster event. Critical readers should find this poignant, as Toby's situation early in the novel is hopeless: after receiving a degree she struggles to find work but is eventually successful, only to be pursued by her rapist, criminal boss, Blanco, proprietor of the dubious Secret Burgers, which uses suspected human remains to make patties. Toby's bildungsroman in the pleeblands is horrifying, and the contrast with Jimmy and Glenn's privilege is stark.

Toby is rescued by Adam One, leader of God's Gardeners, a 'fictional eco-religious cult' (Suchostawska, 2020). The Gardeners are enviro-theological fundamentalists living on rooftop gardens, 'a plural Noah' (Atwood, 2009, p.110), 'twisted fanatics who combine food extremism with bad fashion sense and a puritanical attitude towards shopping' (Atwood, 2009, p.58). Atwood herself mockingly hyperbolises God's Gardeners, which shows unconscious prejudice, conditioned by the neo-liberal world in which she writes, or, more likely, it may be

deliberately cloaking for the Gardeners' significance. There is a definite similarity in admissions of 'the group's ridiculousness' (Defalco, 2017), to the allowance of extreme ridicule of figures in the political green-left, in the media of the 21st Century. Take for example, Greta Thunberg, who was compared to images used in Nazi propaganda (Wright, 2021), or Jeremy Corbyn, who was accused of abusing strawberries grown on his own allotment by turning them into jam (Stevens, 2021). Atwood, one of the highest-selling authors of the early Anthropocene, is deliberately exploiting a mode of expression popularised by mass media, satirising common rhetoric, to expose the way popular media (and individuals on social media) criticise real people's altruistic intentions that threaten neo-liberal ideologies.

The other female protagonist, Ren, is an adolescent who develops into a young woman. Ren becomes a junior member of the gardeners after her mother's elopement from a corporation community, Health Wyzer: she followed Zeb, another renegade character in the trilogy, who plays a greater role the third book, *Maddaddam*. Ren attended the same school as Jimmy, Health Wyzer High: she fell in love with him, unsurprisingly had her heart broken, then got abducted by her mother and taken to the Gardeners. She eventually survives 'the flood' by being stuck in the quarantine unit of the high-end sex-club where she takes up employment in her late teens, Scales and Tails, where employees can have both scales and tails: the initial step in Atwood's imagined advancement towards post-humanism. In Ren's sections, Atwood changes her style, becoming less comical, more naïve in artistic terms: it befits a younger character with less of a cynical view of a world. Ren is a divergent character who frustrates by her lack of meaningful protest and obliviousness to a dying world of vice and corruption, in which she is subjugated: this mirrors the situation of readers, bringing further frustration, or grim realisation. Still, Ren is, like Oryx, a highly important figure of innocence on the trilogy: a victim who makes all the moral corruption of the novel, and the world in which readers live, seem shockingly unjust. The female voices of the second novel are crucial to the trilogy because 'violence [towards women and the natural world] normalizes the persecution of both environments and marginalized bodies, linking resistance efforts to ecofeminist principles' (Hummel, 2019): Atwood shifts the focus from Jimmy, and allows more focused exploration of female experience of climate emergency.

However, there are issues applying ecofeminist views to God's Gardeners, as they are a patriarchal organisation.

The third protagonist offers a unique narrative voice in the trilogy: Adam One, spiritual leader of God's Gardeners, is saviour of many and preacher of hilarious but undeniably logical sermons on the protection of Nature and 'all flesh' (Atwood, 2009, p.91). The sermons precede each chapter and either reflect on previous events or foreshadow those to come, allowing readers brief summaries of the fortunes of the Gardeners at large, which are especially useful after Toby is forced to leave the group, especially before simultaneous plot lines meet and create much suspense for the final novel, *MaddAddam* (Atwood, 2014). There is no way to give a sense of the religious satire and patronising mockery Atwood provides for her readers other than to quote Adam One's sermons directly:

"Then God establishes his covenant with Noah, and with his sons, "and with every living creature." Many recall the Covenant with Noah, but forget the Covenant with all other living Beings. However, God does not forget it. He repeats the terms "all flesh" and "every living creature" a number of times, to make sure we get the point."

-Adam One (Atwood, 2009, p.91)

The effects of Adam One's zealous preaching likely vary from reader to reader, as the Canadian writer mocks the religious faith of the United States, tears a strip off Christianity, while equally providing a theological argument to undermine Speciesism (bias towards one species over others). In other sermons, reference to dinosaurs and fictionally beatified personages such as Saint Dian Fossey, Saint Rachel Carson or Saint Al Gore, create a hilariously awkward melange of spiritual faith and political blindness. Atwood creates 'benign violations' (McGraw, Warren 2010): something humorous because it offends readers enough not to be simply dull, throwing stones at their sense of superiority over other living creatures, while also being distanced enough, through its fictional presentation in an imagined future, to not be a direct criticism. Nevertheless, the harmless nature of Adam One's anti-speciesist sermons stimulate self-reflection and provoke discussion.

With the introduction of the Gardeners, Atwood creates a cult who reject corporate power and inequality: arguably the cornerstones of neo-liberalism. This

means that the novel is unlikely to be taught in English schools under the current Conservative government, as it would be deemed illegal (Busby, 2020), which should provoke a deeper sense of the uncanny in Atwood's novel, as the Gardeners are the ideological enemy of corporate power. They are a profound concept: grounded in areas outside of the corporate closed communities, the pleeblands, they are a depiction of what fighting for survival could be like for average people if there are global resource shortages. They are 'neomedieval' (Spiegel, 2012). Atwood paints the Gardeners as ridiculous, absurd in their adapted blending of Christian puritanism and extreme environmentalism. However, despite her satirical style, Atwood promotes vegetarianism, which is 'one of the main principles characterizing God's Gardeners' lifestyle and is treated as a spiritual issue' (Suchostawska, 2020). Adam One preaches next to Blanco's Secret Burgers stand and admits '"I, too, was once a materialistic, atheistic meat-eater" but then how he "saw a great Light… heard a great Voice… It said, 'Spare your fellow Creatures! Do not eat anything with a face! Do not kill your own Soul!'" (Atwood, 2010, p.48). Eating meat is presented as immoral by Atwood, especially due to that Secret Burgers as an organisation are defying the fifth of the Ten Commandments, thou shalt not kill.

In Atwood's imagined future, government is synonymous with soulless corporate power, which causes characters to regroup under the banner of Christianity. This a common trope in the cli-fi movement, and it is unsurprising as 'Certain biblical stories (the fall of man and the flood) become parables that help people to make sense of current events, such as the ecological crisis.' (Suchostowska, 2020). In Octavia Butler's *The Parable of the Sower* (1993), militant religious groups fight to protect water reserves in a futuristic desert state of California. In *The Second Sleep* (2019), by Robert Harris, imagined survivors of climate disaster in Britain have reverted to a medieval dependence on the Church, as churches and cathedrals are solid, stone-built structures and therefore survive the apocalypse. Ideological and political themes caused Adam Trexler's assertion that climate change 'is little more than a footnote to the novel's concerns' (2015), however more recent critics have identified Atwood's inclusion of the Gardeners in the second novel as fundamental. While it is 'possible to read the God's Gardeners and the Corporations as two sides of the same coin: ideological extremes that parody the slavish adherence to a restrictive, potentially alienating worldview', their way of life 'turns out to be shrewd and practical… emphasizing survival skills that

become essential in a postdisaster world' (Defalco, 2017), and their eco-morality gives them a saintliness when compared to HealthWyzer, OrganInc Farms, the CorpsSeCorps or, worse still, the Painballers (a group of criminals who fight for release back into society, in a battle royale television show). The Gardeners provide 'a direct afront to capitalism' (Defalco, 2017), and to dubious practice for maximum profit, commodification, industrial process, and all the mechanics that uphold neo-liberal ideology. The promotion of an alternative lifestyle is one of the most powerful aspects of *The Year of the Flood* within the cli-fi movement: the Gardeners suggests steps towards a sustainable lifestyle and 'try to resist destructive trends in the mainstream society' (Suchostawska, 2020).

Because of the promotion of sustainability beyond capitalist or authoritarian reaches in cli-fi, cultism is another common trope (see later *The Carhullan Army* (Hall, 2007)). In Atwood's trilogy, almost everything is controlled by the CorpSeCorps, an overarching corporate dictatorship with military capabilities, without a figurehead: not unlike a futuristic East India Company, they can topple nations. By comparison, the Gardeners seem harmless in their extreme pacifism, but this is not the case. Their cultism is precursory to the cult of scientists Glenn forms to carry out his plan, each member named after an extinct animal (Glenn is the red-necked 'Crake'). Extinctathon, an online game in which players compete to recall as many extinct species as possible to outscore an opponent, ironically becomes a recruitment ground for environmental extremists, the platform game originally set up by the brothers Adam One and Zeb. Environmental extremism is another common theme in cli-fi, especially in the American literature post 9/11. The Gardeners are 'probably with us today' according to Atwood (Penguin Random House Productions, 2010), who is always insistent that her writing is not unrealistic, and all of it is based in real-world people, groups, and events. It is hard to argue. Extinction Rebellion (and now also Just Stop Oil) promote their civil disobedience using language no less powerful than the language of Adam One, as anyone signed-up to their mailing list will affirm (Eisen, 2019).

Gardener sermons, delivered always by Adam One, are undeniably comical and enlightening. There is an air of Monty Python in the sermonising Atwood develops, with Adam One's assertions such as 'At the first Creation all was rejoicing,

but the second event was qualified: God was no longer so well pleased. He knew something had gone very wrong with his last experiment, Man, but it was too late for him to fix it.' (Atwood, 2009, p.109). It also recalls Hughes's *Crow*, another text that warps Judeo-Christian mythology (1972). Readers of such passages will struggle not to be amused by the violation of cultural received wisdom, but some critics have analysed Atwood's religious cult more seriously, suggesting that she attempts to 'create a system of ethical principles suited to new challenges that humanity is facing' (Suchostowska, 2020). Nevertheless, Atwood's sarcastic wit is exercised to offer a different reading experience compared to that of other, darker dystopias. However, there is darkness. The unambiguous link between Adam One and Extinctathon and therefore, by association, Glenn, who is obsessed by the computer game, give the Gardeners sense of fertile, dangerous power, foreshadowed even earlier as Toby is saved during a Gardener incited fracas outside Secret Burgers. Adam One somehow knows Toby is being abused, and that she studied Holistic Healing at Martha Graham Academy: the narrator states that from Toby's perspective 'there was no point in asking how Adam One knew that about her. He just knew things.' (Atwood, 2009, p.55). This is further explored when school-boy Glenn, on one of his secret visits to the pleebs, alluded to in *Oryx and Crake*, appears in Ren's narrative, and is taken to visit Pillar, beekeeper of the Gardeners. Toby's narrative revelation that the Gardeners 'had a laptop' which is used 'mostly for the storage of crucial data pertaining to the Exfernal World' (Atwood, 2009, p.255), shows how a laughable cult could be secretly threatening. Seemingly ridiculous groups can inspire radicals, such as Glenn, who takes the radical ideas, and like an unpaired radical atom in a chemical reaction, goes on to cause great devastation, despite his short lifespan. The free-radical chemical principle is poetically explored by Glenn's inability to pair with others: electron bonding is how different atoms pair to form stable molecule, and free-radicals such as hydrofluorocarbon, which creates holes in the ozone layer, are so destructive because they cannot pair and break chemical chains. Whether she realises it or not, Atwood creates a profoundly scientific metaphor. Glenn/Crake is a true radical, a catalyst that leads to the destruction of civilisation, which again highlights Atwood's scientific understanding, which she so humbly denies (MIT Video Productions, 2019).

From an eco-critical perspective, the Edencliff Rooftop Garden is crucial to the series, placed in the centre of the so-called Exfernal World (the rest of society outside Edencliff): it is an Atwoodian allegory. Reflecting on when she arrived, Toby describes how she 'gazed around it in wonder: it was so beautiful, with plants and flowers of many kinds she'd never seen before. There were vivid butterflies; from nearby came the vibration of bees. Each petal and leaf was fully alive, shining with awareness of her... She found herself crying with relief and gratitude. It was as if a large benevolent hand had reached down and picked her up, and was holding her safe.' (Atwood, 2009, p.53). There are descriptions of how Toby and the other gardeners relocate snails, carry soil up fire-escapes, run on treadmills to generate electricity, and continuously weed. Toby is an expert in homeopathic medicine, which adds to the group. Rules are just, decisions made democratically, the whole construct provides a lot of hope. Alas, in *The Year of the Flood*, hope is often challenged: when Toby elatedly discovered the garden, it is described as 'unlikely and somehow disturbing' (Atwood, 2009, p.53). This foreshadows how Toby will be forced to leave, because her ex-rapist-boss launches an attack on Edencliff. The novel takes a disturbing turn at this point: the extinction event begins with the spread of the BlissPluss pill. After Toby has left the Gardeners to work in the remote AnooYoo Spa with a forged identity, her 'unique ecofeminist subject position enables her to cultivate an ethics of place with the potential to regenerate her post-apocalyptic world' (Hummel, 2019). Potential regeneration is something numerous critics have noted in the third and final novel. Toby's symbolic mercy-killing of Blanco by euthanasia: discovering him fatally injured, Toby offers her trespasser a form of forgiveness, as something which makes her a merciful and even 'Christ-like figure' (Northover, 2016) in the mythos of Atwood's cli-fi odyssey.

Additionally, the importance of education is stressed by Atwood in this novel, and this is another faculty of cli-fi: Atwood herself feels that literature in general is 'the guardian of the moral and ethical sense of the community' (Atwood, 1982). Atwood educates readers through sermons given by Adam One to educate the Gardeners, such as that to God 'days are eons, and a thousand ages of our time are like an evening to Him" (Atwood, 2009, p.14), meaning that there is no need for Gardener Christian belief to over-ride the theory of evolution. Interestingly, Zeb teaches Urban Survival to younger gardeners: much more practical lessons,

especially after the flood. This clever employment of ‘Blending Theory’ (Suchostawska, 2020) has been well-explored in in the novel and its criticism: Adam One’s ‘sermons and hymns are based on a blend of the story of creation from the book of Genesis and of the Darwinian theory of evolution. In one input space, there is the story of creation of the world by God, while the other input space comprises the general outline of the theory of evolution’ (Suchostawska, 2020). The blending of the scientific and the religious allows ‘the construction of a new meaning’ (Suchostawska, 2020). However, this new meaning is ambiguous: it raises questions around whether the absurdity of the Gardeners is a respectable existential method of enduring the horror of existence, or, whether they are intended as a damning criticism of intelligent design, since it would seem in the circumstances posited by Atwood, God’s creation, Man, tears down creation itself, and is then replaced. Nevertheless, lessons taught by the Gardeners are based on supposedly moral judgements, whereas Glenn’s action is immoral, but with the introduction of bioengineered creatures with new cognitive abilities, Atwood offers ‘powerfully destabilizing reminders of human consciousness as one form among many, embodying a challenge to this kind of human exceptionalism’ (Defalco, 2017). Atwood’s challenge to theology is a challenge to human exceptionalism, which should educate a more humble, sustainable readership, not to mention more nuanced understanding of morality concerning human power, and a warning against letting the climate emergency reach breaking point.

Part Three: *Maddaddam* – Margaret Atwood

The final novel, *MaddAddam* (Atwood, 2014), Toby plays an even stronger role, and foil is her survivalist partner, Zeb: an unlikely Atwoodian creation. Toby’s narrative explores her romantic relationship with Zeb, providing deep back-story between evening pillow-talk. The third person limited narrative details actions in the present as survivors regroup with genetically modified Crakers and other creatures. This time, the action is complemented by Toby’s education of the Crakers, in first-person Adam One-like sermons, minus strict adhesion to Christian scripture. Finally, there is excitement and intrigue in the contrasting narrative of Zeb, relaying the history of himself and Adam One. Zeb’s is a different, male narrative when compared with Jimmy’s, or Adam One, his half-brother’s, in *The Year of the Flood*. The fraternity is

a skilful Atwoodian counterbalance, giving the series a literary harmony. In *MaddAddam,* Atwood reveals Adam and Zeb's abusive upbringing: being beaten, locked in wardrobes, and made to drink their own urine at the hands of their reverend father, who murdered his first wife, Adam's mother. The Rev, head of The Church of Holy Oil, is one of the most frightening portrayals which help to establish the final novel as a 'satirical cautionary tale about the dangers of extreme anthropocentrism, the transhumanist fantasy of human perfectibility that disassociates the human animal from its social, ethical, and ecological coordinates' (Defalco, 2017).

In *Maddaddam*, readers discover that Ren's friend, Amanda, has been numerously raped, while held captive by Painballers led by Blanco. Simultaneously, at the end of *Oryx and Crake* and *The Year of the Flood* (the point at which simultaneal timelines converge), Jimmy, in a state of delirium due to an infected wound, stumbles upon the Painballers and their prisoners at the same moment that Toby and Ren are close at hand, armed with a rifle. The protagonists don't kill the Painballers, who flee, leaving both Ren and Amanda saved. Ren and Amanda are then raped by the genetically engineered Crakers, although this is not so ethically sinister: the Crakers are primitive and seasonal, so smelling Ren and Amanda's hormones, they perform intercourse according to their biological coding. Toby later refers to it as 'a cultural misunderstanding' (Atwood, *Maddaddam*, p.265). Amanda, it then transpires, has become pregnant: by either the Painballers or Crakers, it is initially unknown. Any meaning in this is ambiguous, but it is fair to suggest that in the first two novels 'the preoccupation with biology as technology marginalizes responsibility, obligation, and the affective and ethical dimensions of human life', whereas post-disaster in *Maddaddam*, 'affective and ethical dimensions' become more prioritised (Defalco, 2017). Within the group of survivalists (a mix of former Gardeners, bioengineers from Crake's laboratory, the Crakers, and the Pigoons, who become more cognitive and communicative) there are discussions concerning Amanda's baby. The way Atwood discusses pregnancy from rape is bloodcurdlingly blunt and it warns that there could be a stronger 'heteronormative agenda imposed by the post apocalypse' (Jennings, 2019). As Zeb says, "Three cheers… first little pioneer born in our brave new world" (Atwood, 2014, p.267). This is another

horrifying warning against ‘neomedieval’ (Spiegel, 2012) society resulting from a disaster event.

Notions of rape and abortion obviously problematic for readers, and with Amanda’s threats of infanticide if she gives birth to a child of her rapist-captives, there is challenging, contemporarily relevant discussion on the heteronormative agenda imposed by patriarchy and reproductive rights. Ivory Bill, a minor male character, former bioengineer on Glenn’s Craker project, suggests during the council of the survivalist group discussing whether to execute the eventually recaptured Painballers, that post disaster, humans “shouldn’t waste increasingly rare human DNA”, that sex with the likes of Painballers would not be necessary, and survivors “could use a turkey baster” to impregnate the women (Atwood, 2014, p.449). Swift Fox, a warrior in the fight against the Painballers, and a heroine with an unapologetic sense of her own sexuality, observes that “Men are always telling women what to do with their uteruses” (Atwood, 2014, p.449). Reproductive rights are a major contemporary issue in the US following the overturning of the Roe vs Wade verdict, the result of which allowed states to ban abortion outright, so it is topical that reproductive rights is reconsidered in a post-disaster setting, as well as logical (Centre for Reproductive Rights, 2022). In relation to this, prospective parents in the 21st Century seem to be becoming put-off: a generation of ‘BirthStrikers’ (Hunt, 2019) are arguing that to have children worsens anthropocentric harm to the planet, and from an ethical viewpoint many argue that it would be unjust to bring children into a world set for disaster. Atwood actively encourages reflection on such arguments in the trilogy.

In *Maddaddam*, Atwood offers further damning critiques of conservatism, capitalism, and religion, through Zeb’s reflection on his theologico-political father’s ‘ranting and bullying, plus golden-tongued whip-’em-up preaching’ (Atwood, 2014, p.138). The Rev’s tactic is to “Tell people what they want to hear… put the squeeze on for contributions, run [his] own media outlets and use them for… slick online campaigns, befriend or threaten [and] evade taxes’ (Atwood, 2014, p.138). This depiction of the head of an organisation, taking money from lobbying oligarchs, could be a blueprint for success in any private enterprise. ‘Call yourself a religion’ as Zeb puts it (Atwood, 2014, p.138), could be traded in a UK context for ‘call yourself a charity’, as many institutions and companies do, to avoid paying corporation tax.

Atwood, through the Rev and Adam One, proves how ‘pious and hell are the flip sides of the same coin’ (Atwood, 2014, p.137). Unbridled worship creates polarisation, which leads to irrational condemnation of behaviours contravening one’s creed: the powers in the Exfernal world to the Gardeners, are what the Gardeners are to The Church of Holy Oil. Each group encourages extremist behaviour using the same technique: blending The Word into support for their agenda. In our world, neoliberal ideology shrouds ethical judgement: party politics are blended with scientific information concerning climate change in what is now recognised as greenwashing. The religious groups veil Atwood’s criticism of far-leaning political movements and warn against of two-party political systems, as their direct opposition is undemocratic. There is no spectrum of ideologies, only halved middle ground, or worse a polarisation of dictatorships. Atwood must be suggesting that political polarisation concentrates the focus on political competition for the dominant agenda (dominance being regarded as a trait toxic masculinity), ignoring the greater issue of environmental despoilation due to another manifestation of anthropocentrism (toxic masculine over-competitiveness), meaning a climate disaster event becomes inevitable. Or, an act of environmental terrorism could be the release of political tension (such as Glenn/Crake’s Waterless Flood). Either outcome is terrifying. However, wheter or not Atwood is leading readers to change their behaviour or attitudes is ambiguous: living off allotments and weaving fabrics from the hair of sheep-alpaca hybrid Mo’Hairs, is somewhat overshadowed by Zeb and Adam One’s escape from their corporate-zealot father and conflicts with the Painballers. This is another example of the inability to address anything other than anthropocentric concerns.

Through Zeb’s brotherly mockery and valiant protection of Adam (‘if anyone lifted a finger in his direction Zeb would beat the crap out of them’ (Atwood, 2014, p.142)), and his work for the charity Bearlift, which saves polar bears from the melting North Pole, Atwood is critical of mainstream environmentalism which feeds ‘off the good intentions of city types with disposable emotions’ (Atwood, *Maddaddam*, p.74). Atwood undermines this type of non-committal attitude towards tackling the climate emergency through Zeb’s environmentalist cyber-sabotage. In Zeb’s youth, ‘Lockpicking became his hobby, and soon enough, with the aid of clandestine sessions on the school’s digital facilities and free time at the public

library, hacking became his vocation' (Atwood, 2014, p.143). Zeb becomes a highly 21st century physical and virtual vigilante, redistributing power in both the physical and digital worlds. White hackers becoming saviours threatens to emerge as another trope in cli-fi: as the normalisation of online personas or avatars continues, so does the incorporation of virtual worlds in literature, as the popular young adult cli-fi novel *Ready Player One* also proves (Cline, 2012). Zeb is an interesting hero: his character, the white hacker and societal outcast accustomed to violence, makes him nuanced. Ethics should be less anthropocentric for the cli-fi hero: challenges to misguided values transfer from previous generations as received wisdom, and to establishments pillaging natural resources while despoiling environments, are crucially important in an Anthropocene hero, while aversions to crime or civil disobedience are not.

Eco-political civil disobedience is becoming the norm in presentations of the Anthropocene hero. The environmental issues faced in the 21st Century are so severe that anything other than radical action is unconvincing; Omar El Akad's *American War* (2017), also features a protagonist who releases a biological weapon, in the novel's context, against the victors of a second American Civil War. The cold logic is easy to follow, just as curious teenager Glenn/Crake observes: if for example 'tick saliva proteins [were] embedded in, say, the common aspirin everyone would be allergic to red meat, which has a huge carbon footprint and causes depletion of forests, because they're cleared for cattle grazing" (Atwood, 2014, p.288) climate emergency would be doused. Nevertheless, environmental extremism in the form of biological warfare seems less likely than neglectful management of ethically dubious scientific projects, in causing the spread of pandemics. Coronavirus arguably warned of this and global changes to the way people travelled, worked, and consumed did seem possible during the pandemic in 2020, but negligible impacts on slowing or reversing climate change could be seen in the IPCC report, *Climate Change 2021: The Physical Science Basis,* proves (IPCC, 2021). The Crakers, with their lack of need for clothing and plant-based diet (eating leaves and grass), provide a pastiche of practises that people in the real world could easily exercise, which would make huge a difference to carbon emissions (Oxford, 2018). What Atwood describes as 'bad fashion sense and a puritanical attitude towards shopping' (Atwood, 2009, p.58) is in other words a rejection of consumerism: boycotting fast fashion, an industry

which is despoiling the environment. These things are not as thrilling as white hackers blackmailing corporations, or scientists unleashing a deadly contagion, but Atwood's trilogy still expresses them as methods of conscious positive change.

Logically, settings of extreme environmental degradation are at the core contemporary fears of an Anthropocene reader and therefore, settings are essential within the cli-fi movement, emphasising the consequences of not making conscious changes away from neo-liberal consumerist behaviours. Atwood's descriptions of how the world begins to crumble establish the trilogy as a cli-fi epic: Zeb's experience of a train journey, taken by him and Adam One, when they finally flee their abusive, matricidal father, creates affective imagery of 'gated communities like the one they'd just fled, fields of soybeans, fracking installations, windfarms, piles of gigantic truck tires, heaps of gravel, pyramids of discarded ceramic toilets. Mountains of garbage with dozens of people picking through it; pleebland shanty towns, the shacks made of discarded everything. Kids standing on the shack rooves, on the piles of tires, on the piles of garbage, waving flags made of colourful plastic bags or flying rudimentary kites or giving Zeb the finger. The odd camera drone drifted overhead, purporting to be scanning traffic, logging the comings and goings of who-knew-who.' (Atwood, 2014, p.155). This passage gives a sense of the true setting before the catastrophic event of the series: a world ruined by neo-liberalism, one which collapses the boundaries between technocratic advancement and the devolution of civilisation, with fortunate individuals protected, and the poor suffering the consequences of climate change, disaster capitalism, and unchecked greed. The degeneration of collective morality, and the environment, influences the two protagonists' reactions: natural preservation and corporate sabotage.

Adult Zeb travels to Santa Monica, where 'The rising seas had swept away the beaches and the once upmarket hotels and condos were semi-flooded. Some of the streets had become canals, and nearby Venice was living up to its name. The district as a whole was known as the Floating World...' (Atwood, 2014, p.207). The Floating World is an homage to *The Drowned World* by J. G. Ballard who presciently wrote 'Soon it would become too hot' (1962) as the opening line of his novel set in a neo-Palaeozoic flooded London. Readers will accept that rising sea levels are likely to damage the future of coastal, low-lying areas, such as East Yorkshire, Norfolk, or

in the United States, New York city, which becomes ‘officially a no-go zone and thus a no-rent zone, so a few denizens [are] still willing to take their chances in the disintegrating, waterlogged, derelict buildings’ (Atwood, 2014, p.228). Atwood vividly portrays what worsening climate emergency landscapes will look like. The technological advancements, the genetically engineered species, the incredible capabilities of plastic surgeons, are overshadowed by the real struggle facing the reader: how to come to terms with a world that is becoming dangerously inhospitable. Greg Garrard suggested in his book, *Ecocriticism*, that ‘to have written the (first) novel (*Oryx and Crake)’* Atwood ‘suggests a modicum of hope that it might sway us toward a better future’, however by the time readers finish *Maddaddam* they uncomfortably receive a ‘bleak prognosis for the survival of our species’ (Garrard, 2011). This evokes the Absurdist question: what is the purpose of humanity enduring such trials? The answer can simply be found in how the events of the book are so thrilling and entertaining.

Atwood claims that there is ‘nothing in these books which did not already exist, for which people were not already doing the science, and some of the things that were theoretical in *Oryx and Crake* have now been done by the way, and for which we don’t have either the technology or experiments already in progress’ (Town Hall Seattle, 2013). She also contradictorily argues that the future is a wonderful thing to write about because ‘nobody can fact-check it’ (The Nexus Institute, 2012). When asked how human beings can change the planet, she is quick to mention that they already have, immensely, in recognition of the Anthropocene. She highlights that each time humans change fuel type, they change values: from hunter gatherers, into agriculturalism, then into industrialism (burning mountains more carbon to sustain more human life). This shows how humans have become more and more self-preserving: anthropocentric to the extent that they may ignorantly ruin the environments which sustain them. Atwood describes technology as a ’double-edged sword’ (The Nexus Institute, 2012): she stresses the need for humans, her readers, to change and avoid hideous consequences because of misled actions, but to remember that it doesn’t mean changing towards a much more, or much less technological lifestyle, but by finding the cliché of balance. Critics seem to agree that ‘in Atwood’s fiction is the revelation that there is no future for consumer and global capitalism’ (Northover, 2016). As a result of the climate emergency, fuelled by

consumerism and capitalism, Atwood imagined the world of the MaddAddam Trilogy. Even in her most recent Booker Award winner, *The Testaments,* there is explicit mention of catastrophic consequences due to climate change, provoking the formation of the Republic of Gilead (Atwood, 2019). This further proves that cli-fi, as a movement, *is* the result of climate change on authors in the 21st Century.

Cli-fi in the UK

British cli-fi often has a connection with history. This is best exemplified in Robert Harris's *The Second Sleep* (2019): readers follow a 'neomedieval' monk (Spiegel, 2010) in the year 1468 and eventually realise that it is one-thousand four-hundred and sixty-eight years after a disaster event in Britain, brought about by climate change. The parallel makes sense because 'Thinking about the effects of climate change requires us to imagine a time in which our future has become our past' (Bracke, 2021): novels set in the future, after a disaster event, can reflect on real history, the processes which led to the Anthropocene, as the reader can, but the writer can also reflect on and criticise the present, and forecasted futures, as if they too were history. This allows for satire: condemnation of modern Britain's inability to curb impacts on the environment. The British are not, as Boris Johnson put it, 'hair shirt-wearing, mung bean-munching eco-freaks' (2020). That would be anti-capitalist to the point of treason. J.G. Ballard said, 'people living in the cosy suburbia of Western Europe and America never appreciate just how vulnerable we are to climatic disaster.' (Elborough, 2006). While British readers are probably not totally ignorant of their vulnerability in the climate emergency, most are reluctant to embrace radical change. However, some readers probably are, and critics now acknowledge that celebrated and popular British writers, such as David Mitchell, Ian McEwan and John Lanchester, have produced award-winning cli-fi novels, confirming this historic literary movement of the Anthropocene.

David Wallace-Wells, in his own best-seller *The Uninhabitable Earth: A Story of the Future*, suggests that there should be 'no great prize for being right about the end of the world' (2019), however, 21st Century British novelists are clearly fascinated by hypothesising the result of the climate emergency. These fictional hypotheses, often based in hard science, contribute to making cosy British suburbia less comfortable: a powerful function of fiction. Except for Harris's novel, British cli-fi tends to avoid religious fervour in coping with climate crisis, unlike in American contemporary cli-fi. British cli-fi tends towards a mix of enviro-political dystopia and environmental terrorism, often including Guy Fauxean sabotage directed towards the establishment. Both UK and US novelists expose contemporary political issues, such as jingoism in Lanchester's *The Wall* (2019), or condemnation of institutional racism and inequality in Omar El Akkad's *American War* (2017). However, British authors seem more concerned with the physical and mental challenges of surviving climate

disaster, as opposed to projecting how technology or conviction could save humanity.

Rather than investigating more renowned authors in the UK, this thesis seeks out the most realistic imagined futures. Lanchester's *The Wall* (2019) possesses a conceivable idea: sea levels rise and a defensive wall rings Britain, with characters serving compulsory National Service. However, the fortuitous survival of the protagonists is farfetched. David Mitchell's effective exploration of cli-fi only comes in the last sixty pages of *The Bone Clocks* (2014), which otherwise involves much non-climate related magic and adventure. Harris's twist on historical fiction is innovative, and critics seem unwilling to dig into the worship of pocket-sized, shiny-black objects, in which character's faces are reflected. The resolution is powerful as the protagonists and their hope of regeneration are buried underground, but it is unlikely that monasticism would prevail, even in a neomedieval setting. Two realistic novels in which climate change is a central theme and a direct cause of drama are: *Doggerland* (2019) by Ben Smith and *The Carhullan Army* by Sarah Hall (2007). Flooding plays a huge part in British cli-fi, apparently due to 'preoccupation with the great flood from its parent cultures: witness, for example, both Mary Shelley's 1826 novel *The Last Man* and Richard Jefferies's 1895 *After London*' (Miller and Burgman, 2018). *Doggerland* and *The Carhullan Army* can also be regarded as 'flood fictions' (Bracke, 2021), along with Lanchester's *The Wall* (2019)*, When the Floods Came* (2015) by Clare Morrall and *The Ship* (2015) by Antonia Honeywell. Because 'changing environmental and climatological circumstances will make floods twenty times more likely by 2080, affecting at least twice as many people as are currently at risk' (Bracke, 2021), flood fictions envisage convincing settings. Furthermore, the novels critiqued below have interesting voices, deviate from traditional environmental dystopias, and set themselves apart from other contemporary cli-fi.

Part one: *Doggerland* – Ben Smith

The first eighty pages of *Doggerland* (2019) capture the desolation of the North Sea perfectly: the first three sentences of the novel are ‘Nothing. Nothing. Nothing.’ (p.1). Smith shows threatening power in the setting from the first page, in nothingness: previously Doggerland, a grassy plain, turned into thousands of loosely connected pre-historic islands 20,000 years ago, then covered by water 12,000 years ago. The novel was published during negotiations for Brexit, as was *The Wall* (2019), and the idea of being isolated or adrift is prominent in both novels, creating isolating fear for readers, so commonly well-connected. Smith’s dystopian setting is developed by allusions to ‘environmental collapse in the 2000s’ (Claeys, 2017): floating tidal barrages, rafts of drift-plastic, houses on moorings, floatation tanks and redrawn maps with ‘flood defences, drainage fields and reinforced beaches now well below the waterline’ (Smith, 2019, p.68). Rather than characters dominating the story, context and setting are put to the fore: the characters compete with the dominant, unconquerable environment but cannot overcome it. Character-versus-setting becomes dual focus, much like in *The Wall* (2019) or McCarthy’s *The Road* (2006); in all three novels, the setting is eponymous, and the narrative voice can be as bleak and barren as the surroundings of the characters, creating dread. *Doggerland* (2019) reinforces the idea that setting in cli-fi is paramount to success: a changing trend in contemporary fiction because writing ‘in the Anthropocene also means coming to terms with its vast spatial scale’ (Bracke, 2021), not to mention its changing nature. This is a challenge, which is often met by ‘depicting very constricted spaces’ (Bracke, 2021): the rig in *Doggerland* (2019) conforms to this trend, compounding the reader’s dread, mixing claustrophobia with isolation. While constricted spaces are safe havens, in this case from ‘the sheer tonnages hauling past every second’, as the ‘currents [rip] and [surge]’ (p.1), they also allow character and reader watch in horror as civilisation fades. There is a ‘shift from a concentration on political collectivism’ (Claeys, 2017) in *Doggerland* (2019), as Smith is ‘more focused on how the Apocalypse feels’ (Claeys, 2017): it is likely to be terrifying, but far less colourful than Atwood’s depiction, making *Doggerland* (2019) more realistic.

Within the threatening, omnipotent setting, at character level, Smith is concerned with the philosophical question of what could make life worth living in a

post-disaster context: a historic question, projected into the future. This existential crisis protagonist Jem experiences, unsuccessfully fishing from the platform of the rig, is perfectly mirrored in the setting: ‘the whole North Sea, hauling waste and caste-offs out from every coastline. Some days there [are] swathes of shining fluid that [coat] the surface of the water. Other days, shoals of plastic bags and bottles… rise from the depths like bulbous light-seeking creatures. The boy [sees] tidal barrages and bleached clothing, the brittle shells of electrical appliances. He [sees] furniture and timbers tangled together so they looked like make-shift rafts; and once, a whole house torn loose from its moorings, drifting through the farm, slumped and tilting on its floatation tanks’ (Smith, 2019, p.5). Here, Smith exposes the contextual setting: a decaying offshore windfarm, amidst catastrophic sea level rise, and civilisation collapse. The reader feels the hopelessness of the desolation, as Earth itself has lost its reason for being: it no longer supports life and is merely cycling humanity’s detritus. Alongside flooded landscapes, settings at sea are popular with Anthropocene authors: Lanchester’s protagonists are cast out by their government after failing to protect the coastal ‘Wall’, fighting immigrants during compulsory national service, but find asylum on an offshore rig (2019). In the resolution of *The Bone Clocks* (2014), the atemporal Marinus appears, reincarnated, to rescue the remaining protagonists on an Icelandic naval vessel. The contours and limits of Britain are expected to change as sea-levels rise and in *Doggerland,* ‘where there had been a solid line separating land from water’ there are ‘new, snaking contours making the highs and lows of the tides’ (Smith, 2019, p.68). Outside the new borders of Britain, Jem is cast alongside the older Griel, who wavers between accepting the meaninglessness of their plight in carrying out maintenance on the slowly dying windfarm, and fervently searching for something on the seabed. Griel is the foil to Jem’s youthful optimism, but the resolution reveals Griel’s existence on the rig is to protect his own son from the same fate Jem: Jem’s father ‘reneged’ (Smith, 2019, p.33) on his contract, disappearing in an accident, that led to his son substituting for him as engineer. The safeguarding of youth could be the principal allegory of Smith, Lanchester and Mitchell’s works: the reason for not falling into nihilism, is that humanity could survive climate disaster and descendants could live on, if in far smaller numbers.

The third-person limited narrator depicts Jem fishing for meaning, at the beginning and end of a cyclical, Sisyphus-like plot. Unlike Sisyphus, Jem and Griel have companionship, and their dialogues bear similarities with dialogues in the plays of Beckett and Pinter. Smith thus ties his novel into the literature of the Absurd (Masterclass, 2022), with non-sequitur dialogues and inexplicable actions. During a game of pool between Jem and Griel, 'no one was allowed to talk', and 'As they [play] they [add] more rules', while 'the worst and longest of storms' of 'depthless black' causes the rig to shudder and tilt, until Griel passes out 'slumped over the table, still standing, his face resting on the baize.' (Smith, 2019, p.118-122). Readers initially infer that the protagonists' fishing could lead somewhere, but as the novel progresses, they and the protagonists find only 'fragments of things that could never be fixed' (Smith, 2019, p.51). The motif of brokenness in the book is always an allusion to the environment, making the book chilling. Camus wrote in *L'Homme révolté* (*The Rebel*) when a '*la trône*' (the throne) of belief is overturned, man begins a '*un effort désespéré*' (a desperate effort) to create order, but finally *'[il] s'abandonne enfin à la negation de toute chose ou à la soumission totale*' (abandons himself to the negation of all things or to total submission' (Camus, 1951). Beckett and Pinter portrayed humanity grasping for purpose after their post-war belief of relative safety was overturned by nuclear threat, resulting in disturbing senses of powerlessness and disorientation. Smith portrays humans grasping to find purpose after climate disaster and submitting to the idea 'that one must act, with others, wherever one happens to be, by simply doing one's job' (Aronson, 2022), if that job facilitates the coexistence of man and nature. Existentialism and Absurdism do recognise the ability of the individual to define their own meaning in existence, either through a leap of faith or subjective moral belief (Marshall, 2020), but both assert that meaning is arbitrary, and absurdists say that any meaning is toppled by death (Aronson, 2022). Existential nihilism recognises no possibility of meaning in life, that 'Everyone, everywhere, at every point, has no value in the universe' (MasterClass, 2022): this is explored more in Ballard's pioneering cli-fi novel *The Drowned World* (1962), as the protagonist eventually rafts his way south from neo-Palaeozoic London towards uninhabitable regions, due to brain alteration from the heat and humidity of the neo-Palaeozoic climate, hastening his inevitable demise as he realises the lack of value in anything; Toby's portrayal in *Maddaddam* (2014) forms a similar impression when she loses the one thing she valued, Zeb. Existentialism and

Absurdism are often relevant in cli-fi: profoundly in Smith's novel. Readers will ask: if thresholds have already been passed, leading to catastrophic climate change, can there be any purpose, even in climate action? This creates existential dread or what has been termed 'climate anxiety', which 'is rising amongst young people and is among one of their biggest concerns' (Rae and Wilson, 2022). Reading these narratives and following the characters recalls Kierkegaard's *Either/Or*, in which he wrote 'Life for me has become a bitter drink, and yet it must be taken in drops, slowly, counting' (1843). Living in a climate crisis, this notion of enduring pain, by degrees, resonates strongly.

The North Sea borders the lowest areas of Britain, and the Holderness coastline is the fastest eroding coastline in Europe; it is often included on GCSE and A-Level Geography courses, so encroaching seas are already on the minds of British readers. Smith's Britain is not so far into the future as Ballard's in *The Drowned World* (1963). Smith's historical basis does not stretch so far back into prehistory: there are snippets of non-fiction, intersecting the chapters of the novel, entitled with dates, which describe the process of the flooding of Doggerland during the Holocene. These contribute to the narrative twofold: they prove how attempting to protect low-lying areas of Britain from the encroaching sea is futile, but they also show that the geological epoch prior to the Anthropocene passed with great environmental change. For example, Ravenserodd was a settlement which was washed away by the rising waters of the Humber Estuary, recorded in the Chronicle of Abbot of Meaux, 1355, excerpts of which can be found online:

'That town of Ravenserodd, in the parish of the said church of Easington, was an exceedingly famous borough devoted to merchandise, as well as many fisheries, most abundantly furnished with ships, and burgesses amongst the boroughs of that seacoast. But yet, with all inferior places, and chiefly by wrongdoing on the sea, by its wicked works and piracies, it provoked the wrath of God against itself beyond measure. Wherefore, within the few following years, the said town, by those inundations of the sea and the Humber, was destroyed to the foundations, so that nothing of value was left.' (Green, 2016)

Knowledge of disappearing landscapes could have influenced Smith's conception of the novel, as the east coast of Britain continues to recede. The Abbot of Meaux blamed the wrongdoing of the pirates of Ravenserodd and cited the wrath of God for the drowning of their settlement, however, Smith and other cli-fi authors in the UK mostly take an atheistic stance on the reasons for climate change. Smith commented in an interview with Literature Works 'that people are created or informed by the places they are from. This seems to be the case particularly on a local level. Our locality can be defining and the impact of changes in our personality therefore become more obvious as we change our geography' (2020). The reason his novel has resonated with readers, many of whom are living on an eroding island and fear the encroaching sea, is that it is about philosophically 'loving the world in a moment of mass extinction… salvaging ourselves' (Harvard University, 2016). It is not hovels, nomads and marshes, but concrete, metal, and hundreds of thousands, if not millions, of inhabitants that would meet the encroaching waters in a disaster event. In Smith's novel, disaster has already happened, and humans are still removed from the consequences. There are fewer humans: the book only features three characters. The implication is that most of the other humans have gone, perhaps even government has gone, the characters seemingly relying on pirated or salvaged supplies. The overwhelming senses of cold, wet, and lack, are deeply disturbing.

Along with geological history, Smith reimagines historic political structures: society is (or was) under the control of 'the Company'. The irony in this name, in the melding of totalitarianism and libertarianism, is both amusing and dark: Smith implies that, like 'the Party' in *1984* (Orwell, 1949), the Company is omnipotent, merciless, and devoid sentimentality, but its name suggests just another competitive private enterprise. A large part of the novel's tension centres around the boy's desire to escape his 'duty' according to the 'policy' of the Company: 'the duties and services [are] guaranteed' as after his father's death, the boy must take on his father's position according to a contract, which states that 'the term of service had to be fulfilled' (Smith, 2019, p.34). The insensitive, cold corporate jargon echoes the constraints of financial or professional obligations. However, ambiguity encourages the inference that this politico-corporate body might have collapsed. The potentially collapsed 'Company' is another existential joke: the characters working for an institution that no longer exists. Politics always come second to philosophy in this

novel: it is an exploration of existential purpose in the post-climatic disaster setting, brought about by the failure of neoliberalism to cope with the climate crisis. Jem, on the periphery of a foundering civilisation, paradoxically attempts to preserve technology that was supposed to save it, all amidst the irresolvable emptiness of the expanding North Sea. He takes his existential leap of faith by embodying selflessness: trading his means of escape for medicine to prolong Griel's life. In doing so, Jem gains the father he never had, which helps him endure. Although Jem loses the desire to seek another existence, he loses his angst, a word deriving from Kierkegaard's term *angest* (Danish), which describes the force all humans must fight to overcome. Smith promotes a Sisyphus-like routine-acceptance as a cure for climate anxiety. The existentialist crises faced by Jem and Griel, make *Doggerland* part of a great literary tradition, in which characters become content with or at least accept their struggle. Camus wrote: '*la lutte elle-même vers les sommets suffit à remplir un cœur d'homme; il faut imaginer Sisyphe heureux*.' *(Le Mythe de Sisyphe,* Camus, 1943). Translated: 'the struggle itself against the mountain fills the heart of man; one must imagine Sisyphus happy'. Even though Jem's rock rolls back down the hill, the cyclical plot brings a total resolution: a return to the ordinary world, with a boy content to look-up to his pseudo-father, the substitute for what he was looking for. The novel begins with Jem fishing off the edge of the rig, and he catches nothing but 'a greasy mess of netting and plastic', saying, "Strange fish" (Smith, 2019, p.2). The novel ends with Jem fishing off the rig, with the final line of the story: '"Strange fish," he said, his voice merging with the wind.' (Smith, 2019, p.243). The actions of fishing in the sea of junk, or searching for a lost father, are symbolic of impossible search for the meaning in an absurd existence, in a chaotic and hopeless world, as part of a doomed species, who seem to have hastened their own demise. However, as Jem's voice merges with the wind, Smith at least hints at acceptance of a less anthropocentric future, becoming at one with nature.

Unlike Atwood or Hall, Smith doesn't deal with the breadth of human suffering resulting from a degrading climate. He uses the ambiguity of the Company and Jem's perspective, seeing of the maps on the supply boat, to give the reader a vague sense of how bad things could become. Jem and Griel seem lucky, as despite their binding contracts, they have tinned food, warmth, shelter, and a sense of purpose: maintaining the wind farm. This is an exploration of Sartrean bad faith, as

they are engineers over anything else, denying other choices available to them (stopping, escaping, returning to the mainland), their Pinter-Beckettian dialogues often involving language relating to fixing or mending. Smith somewhat undermines the purpose of windfarm engineers, as Jem and Griel acknowledge that they can't keep the farm going forever, and this could be a critique of vain-glorious attempts to fight the climate disaster with renewable energy initiatives, an industry developed to save humanity from its own folly. Smith shows how human beings see the degradation of the natural world 'as a sequestered story, unfolding separately from our own modern lives – so separately that the degradation acquires the comfortable contours of parable, like pages from Aesop, aestheticized even when we know the losses are tragedy' (Wallace-Wells, 2019). When Jem asks Greil, 'Do you reckon there's anything down there?', Griel replies 'A whole country, a whole continent.' (Smith, 2019, p.28), showing a nostalgic longing for a world not so altered by rising tides. Smith gives his readers characters who don't need to be led by religion or politics: his protagonist is faced with choices but decides on bathetic inaction, which warrants no explanation. Unlike Atwood, who amplifies and scrutinizes the faults of consumer culture, capitalism, and corporate power, finally exposing them as utterly vapid after a global catastrophe, Smith focuses more on the potential for irrational loyalty, in relationships with another human or to a way of living, and an existentialist philosophical truth in his imagining of post climate disaster: that existence is absurd. People live in chaos, and any meaning they attribute to life is entirely arbitrary and therefore illogical. Thus, Smith brings diversity to the cli-fi movement: as well as representing thrilling rebellions and morally questionable heroes, cli-fi can question the very purpose of existence. In Smith's future vision, selflessness and friendship, alongside toil and determination in the face of total uncertainty, is his allegory to a world in climate crisis.

Part Two: *The Carhullan Army* – Sarah Hall

Like Atwood, Lanchester, and Smith's works, Hall's novel is speculative cli-fi with roots in dystopian literary heritage. In the first few pages, echoing back to Ballard's 'Soon it would become too hot.' (1962), Hall writes: 'The change of temperature brought with it a feeling of excitement, an alertness that went beyond nerves or heightened awareness of the risks I knew I was taking. It was restorative. The cool

reminded me of my childhood. Back when the weather had been more distinct, separated. Some older people in the factory where I worked said of all the English traditions to have been compromised, the weather was the saddest.' (Hall, 2007, p.5). Hall continues to foreshadow the worst in almost a direct address to the reader, through the prescient warning of 'You don't fear possibility when you're young. You don't believe the world can be broken or that anything terrible can happen in your lifetime… Even the rain is different now; erratic, violent, not the constant grey drizzle of old postcards, jokes, and television reports. It's rain that feels wounded.' (Hall, 2007, p.5-6). The pained narrative tone is set early in the novel and readers can make the connection between the degradation of the climate, and the degradation of individual rights and collective. The personification of the rain and its movement from a static image on a postcard or tele-chart icon brings the threat of climate change powerfully to life, in a relatable way for readers, who are now seeing effects of climate change: it is terrifying.

The narrator is the protagonist, a 'sister' of Carhullan (another setting giving name to the novel), a country house in the Lake District. The Carhullan army is run by Jackie Nixon, the leader of female renegades, sisters, outside of society controlled by 'the Authority' (Hall, 2007, p.9); citizens are forced to work in factories and drugged into compliance, planting the novel in the tradition of British dystopias inspired by totalitarianism. Fossil fuels have dwindled to near-complete depletion, the Thames barrier failed, and large parts of Britain are submerged. The resulting 'Civil Reorganisation' (Hall, 2007, p.8), sponsored by a nondescript American theocracy (very Atwoodian), has led to rationed electricity, more canned food, and people being squashed into quartered dwellings in remaining towns and cities. This further proves that Anthropocene authors, facing the challenge of depicting a vast temporal space, manage the speculative load by exploring discomforting character confinement, with the liveable world getting smaller, as even Carhullan itself is an isolated estate. Setting has narratological and allegorical functions in the novel. Hall presents a dichotomy between a pastoral utopia, Carhullan in the Lake District (a defining locality for the author, who grew up there), set in opposition against horrifying urban dystopia, Penrith ('Rith' (Hall, 2007, p.9)). The bleak austerity and confinement make Rith convincing as an urban dystopia. Sister's healing and liberation, through embracing a sustainable lifestyle in the commune, Carhullan, is set on the moral and

literal high ground, above the oppression of Rith under authoritarian rule, much like Toby's salvation with the God's Gardeners is set against the oppression of the Corpsecorps in Atwood's trilogy, above the city on the Edencliff Rooftop. Furthermore, the central problem of Hall's political cli-fi dystopia, like Atwood's, is that it involves biomedical science: all women living under the Authority are implanted with a contraceptive coil (Hall, 2007, p.27). This is no doubt what lead Adam Trexler to lamentably claim that 'gender-driven guerrilla resistance at the end of the novel ultimately loses sight of the contradictions of climate change, re-enacting a battle on the familiar terrain of personal freedom and gender relations.' (2015). This is a disappointing assessment of the Malthusian threat to women's rights should population levels be principally blamed for climate change, Trexler ignores the significance of the discussion of reproductive rights. There is an ironic parallel between Hall's conception of *The Carhullan Army* and the idea of being 'a rebel from the waist downwards' (Orwell, 1949, p.165). In Orwell's novel, reference to female sexuality is pejorative, but in Hall's novel, the idea of sexual rebellion is much more symbolic. A Guardian article from 2017 was published under the headline 'Want to fight climate change? Have fewer children' (Carrinngton, 2017). With headlines such as this and previously mentioned 'BirthStrikers' (Hunt, 2019), it is easy to see how alarmism about population size could turn into compulsory implanted contraception under the threat of climate disaster. Hall's novel differs from Smith's here, as it is much more concerned with the collective repercussions of climate change on women, rather than focusing on individuals, or men.

Because Sister's narrative is a 'Statement of [a] female prisoner detained under Section 4(b) of the Insurgency Prevention (Unrestricted Powers) Act' (Hall, 2007, p.1), the novel establishes a contextual parallel with the testimony of Katherine Gunn. Whistle-blower on the famous Frank Koza memo, Gunn broke the Official Secrets Act (Bright, 2003), attempting to prevent her country from entering an illegal war with Iraq. The time periods align, this book was published in 2007, four years after Martin Bright's article was published, and four years before the Iraq War ended. The American influence in Hall's imagined future for Britain is almost certainly inspired by the influence of the Bush Administration; in the novel, Sister describes how 'the reinvented Forward Party, who had taken office under the banner of reform... then signed The Coalition Oil Treaty' with the USA (Hall, 2007, p.24). After

the unpopular era of Donald Trump and the rise Brexit-fuelling nationalism in the UK, this interdependence between the UK and USA is somewhat dated. Trexler claimed that *'The Carhullan Army* is noteworthy for the way it shows the climatic conditions on which Britain's markets and political order depend, but its historiography problematically assumes that any alteration from late capitalism must lead to a Soviet-tinged authoritarianism. This historical interpretation is even more problematic, given that late capitalism is blamed for climate change in the first place' (Trexler, 2015). However, as has been argued throughout this thesis, it is understandable that cli-fi should have a connection with history, and Trexler arguably fails to recognise the contradictions of capitalism: if neo-liberalism does come to an end, more authoritarian governments will enforce more control over citizens, as it is the only alternative to anarchy. The 'Ten-Year Recovery Plan' of the 'Forward Party' in Hall's novel (2007, p.28) could easily be the name of a real political scheme, built by a radical party on a foundation of illusive facts. Just as the Blair-Bush administrations' assertions about finding weapons of mass destruction in Iraq were false, Conservative promises to tackle climate change also seem shrouded in misinformation. The Conservatives under Johnson continually contradicted themselves, with members of their own party attempting to pass plans to open a coal mine in Cumbria, pursuing ways to prolong the lucrative yet unsustainable and damaging use of fossil fuels. Conservative party members accused Johnson's cabinet of having 'bowed to climate terrorists' (Forrest, 2021) when Robert Jenrick, Secretary of State for Housing, Communities and Local government, announced he would hold an inquiry into the proposed opening. Furthermore, Johnson said that Margaret Thatcher supposedly made 'a big early step' (BBC News, 2021) in the fight against climate change, closing coal mines in Britain, but neglected to mention that in 2019 Britain imported over six million metric tonnes of coal, and fifty million in 2013 (Statista, 2021). This manipulation of information by politicians is certainly explored as a concept in *The Carhullan Army*, just as it was in *1984* (Orwell, 1949), only the subject of misinformation is no longer war or tyranny: it is the climate. Hall obviously sought to suggest that misinformation, green washing, is shrouding the biggest issue of the 21st Century: the climate emergency.

The Carhullan Army's militant feminist nature reflects the growth of female empowerment in the 21st Century. It has been compared with *The End We Start*

From by Megan Hunter (Bracke, 2019), which also raises questions about reproductive rights and motherhood in the face of climate disaster, opening with the words: ‘I am hours from giving birth, from the event I thought would never happen to me’ (Hunter, 2017, p.1). As Hunter’s similarly nameless narrator gives birth, the Thames bursts its banks. The flooded settings and displacement of individuals in both novels are frighteningly conceivable for readers. Additionally, both narratives are fragmented, timelines slipping backwards and forwards, and this gives readers ‘a sense of alienation that captures the experience of understanding and living with climate crisis’ (Bracke, 2019). Readers finish Hall’s novel with an uncanny sense of relatability and closeness to the text, recognising how such a future could be realised because of climate change, and because of the ruthless quashing of attempts by hardliner climate activists to challenge to establishment.

Conclusion

This thesis will end by acknowledging that, fourteen years after the publication of Atwood's Anthropocene-dystopia trilogy, there are clear trends in politics and society which could give rise to the sort of anarchic groups which evolve throughout the Maddaddam trilogy, *The Carhullan Army* and other Anthropocene cli-fi. Extinction Rebellion have now been documented by the BBC (BBC Three, 2019), just as the fictional Jackie Nixon supposedly was in Hall's novel. Adam Trexler supports the notion that the politics of the early 20th Century were a catalyst for the cli-fi movement, stating that 'There was a spike in publications around 2008, likely due in part to George W. Bush's re-election in 2004, when there appeared to be little hope of American leadership on environmental issues' (Trexler, 2015). Although unrelated to British or North American literature, the *zone à défendre* (zone to defend) manifestations in France, beginning in the early 2010s, have also inspired artists, such as graphic novelist Alessandro Pignocchi, who depicted the defence of Notre-Dame-des-Landes, near Nantes. In his book, *La recomposition des mondes (The Recomposition of Worlds,* 2020*)*, Pignocchi creates a story around an occupation protest which prevented the development of a new airport, thanks to the discovery of an endangered species of salamander. One must also mention the numerous disaster movies of the 21st Century, good and bad, based on climate change. These attempts to bring climate disasters to life complement the works of cli-fi writers, with adaptations and original films helping to depict what climate disaster might look like. The best cli-fi movies (if such things exist) are probably *Mad Max: Fury Road* (2015) and *WALL-E* (2008) based on their conceivability, judged against logical scientific hypotheses for future climate projections. Furthermore, for indisputable proof of the cli-fi movement pervading into all areas of culture, look no further than the most played online video game: Fortnite. The game writers created a world in which players battle for survival, hunting for scarce resources in a damaged world, with a diminishing area in which players can survive, as a toxic storm closes in around them, causing a slow death (McDonald, 2020). Indeed, 'world creation has been central to literary hermeneutics from its earliest stages' (Chang, 2021) and this continues to be true in the 21st Century.

The effects and influences of cli-fi have been shown in this thesis, however, one must be aware of the danger that popular culture's spread of an idea 'could make it become still more dematerialised' (Trexler, 2015), only leading to further ignorance of environmental issues. Nevertheless, literary cli-fi's grounding in science fiction, speculative fiction, and dystopia, as well as its intersections with other literary genres, graphic novels, television, and film, attest to the idea that cli-fi is more than a genre: it is a cultural movement which is inspiring artists in various media. There are different styles with nonetheless similar tropes, particularly when one compares British writers and those from North America. One would imagine that cli-fi from other areas of Europe, Africa, Australasia, or Asia would be different again from British or North American styles (Cixin Lui's work would be make for an interesting comparative study). Climate change is causing different weather phenomena in other parts of the world, changing environments at different rates, leading to different degrees of impact in the present and near-future, therefore: cli-fi transcends genre, because its scope is so broad. One thing is certain: climate change has already begun to change the world, and the literary landscape and its readership has changed accordingly.

3. Bibliography

1. Abnett, K., Jessop, S. and Nasralla, S., 2021. *BP's lobbying for gas shows rifts over path to net-zero emissions*. [online] Reuters. Available at: https://www.reuters.com/world/uk/bps-lobbying-gas-shows-rifts-over-path-net-zero-emissions-2021-05-17/ [Accessed 13/5/2021].
2. Allawi, A. and Birol, F., 2021. The Guardian: *Without help for oil-producing countries, net zero by 2050 is a distant dream* [Online]. Available at: https://www.theguardian.com/commentisfree/2021/sep/01/oil-producing-countries-net-zero-2050-iraq [Accessed 2 September 2021].
3. Aronson, Ronald. 2022. The Stanford Encyclopaedia of Philosophy: Albert Camus [Online]. Available at: https://plato.stanford.edu/entries/camus/#Bib [Accessed 28/05/2023]
4. Atwood, Margaret. 1982. *Second Words: Selected Critical Prose 1960-1982*. Anansi, Toronto.
5. Atwood, Margaret. 2003. *Oryx and Crake.* Varago, London.
6. Atwood, Margaret. 2005. *Curious Pursuits: Occasional Writing 1970-2005*. Virago, London.
7. Atwood, Margaret. 2009. *The Year of the Flood*. Virago, London.
8. Atwood, Margaret. 2011. *In Other Worlds: SF and the Human Imagination*. Virago, London.
9. Atwood, Margaret. 2014. *MaddAddam*. Virago, London.
10. Atwood, Margaret. 2019. *The Testaments*. Chatto & Windus, London.
11. Ballard, J. G. 1962. *The Drowned World.* Fourth Estate, London.
12. BBC News. 2021. *Canada heatwave: Wildfires spread in British Columbia after lightning strikes*. [Online] Available at: https://www.bbc.com/news/world-us-canada-57703853 [Accessed 21/5/2021].
13. BBC News. 2021. *Boris Johnson faces backlash over Thatcher coal mine comments* [Online]. Available at: https://www.bbc.co.uk/news/uk-politics-58107009 [Accessed 6/8/2021]
14. BBC Three. 2019. *Extinction Rebellion: Last Chance to Save the World?* [Online]. Available at: https://www.bbc.co.uk/programmes/p07fvjfs [Accessed 10/3/2021]

15. Bitesize, BBC. 2021. *Coastal Management Case Study: Holderness Coastline* [Online]. Available at: https://www.bbc.co.uk/bitesize/guides/z2234j6/revision/4 [Accessed 17/6/2021]
16. Blakemore, E., 2021. *Human-Pig Hybrid Created in the Lab—Here Are the Facts*. [online] National Geographic - Science. Available at: https://www.nationalgeographic.com/news/2017/01/human-pig-hybrid-embryo-chimera-organs-health-science/ [Accessed 21/10/2020]
17. Bracke, A. 2019. "Flooded Futures: The Representation of the Anthropocene in Twenty-First-Century British Flood Fictions", *Critique - Bolingbroke Society,* vol. 60, no. 3, pp. 278-288.
18. Bracke, A. 2021. “The Novel,” in Parham, J. (ed.) *The Cambridge Companion to Literature and the Anthropocene*. Cambridge: Cambridge University Press (Cambridge Companions to Literature), pp. 88–101.
19. Bright, Martin. 2003. The Observer: Revealed: US dirty tricks to win vote on Iraq war [Online]. Available at: https://www.theguardian.com/world/2003/mar/02/usa.iraq [Accessed 2/4/2021]
20. Bouson, J.B. 2016, "A “joke-filled romp” through end times: Radical environmentalism, deep ecology, and human extinction in Margaret Atwood’s eco-apocalyptic MaddAddam trilogy", *Journal of Commonwealth literature,* vol. 51, no. 3, pp. 341-357. [Online] Available at: https://journals-sagepub-com.hull.idm.oclc.org/doi/pdf/10.1177/0021989415573558
21. Busby, M., 2020. The Guardian: *Schools in England told not to use material from anti-capitalist groups* [Online]. Available at: https://www.theguardian.com/education/2020/sep/27/uk-schools-told-not-to-use-anti-capitalist-material-in-teaching [Accessed 4/4/2021].
22. Butler, Octavia E. 1993. *The Parable of the Sower*. Headline, London.
23. Camus, Albert. 1943. *Le Mythe de Sisyphe.* Gallimard, Paris. Page 1.
24. Camus, Albert. (1951). L'homme révolté. Gallimard, Paris. Page 35.
25. Carrington, Damian. 2017. *Want to fight climate change? Have fewer children.* The Guardian [Online]. Available at: https://www.theguardian.com/environment/2017/jul/12/want-to-fight-climate-change-have-fewer-children [Accessed 3/3/2021]

26. Centre for Reproductive Rights. 2022. ‘After Roe Fell: Abortion Laws by State’. [Online] Available at: https://reproductiverights.org/maps/abortion-laws-by-state/
27. Chang, A. Y. (2021) “Digital Games,” in Parham, J. (ed.) *The Cambridge Companion to Literature and the Anthropocene*. Cambridge: Cambridge University Press (Cambridge Companions to Literature), pp. 163–178.
28. Christie, Janet. 2013. The Scotsman: “Interview: Margaret Atwood on her novel MaddAddam”. [Online]: https://www.scotsman.com/arts-and-culture/interview-margaret-atwood-her-novel-MaddAddam-1562906 [Accessed 11/10/2020]
29. Claeys, Gregory. 2017. Dystopia: A Natural History. Oxford University Press, pages, 3, 5, 481-501.
30. Clark, Timothy. 2015. Ecocriticism on the edge: The Anthropocene as a threshold concept. Available at: http://ebookcentral.proquest.com.
31. Clarke, Jim. 2013. “Reading Climate Change in J.G. Ballard.” *Critical Survey* 25, no. 2. [Online] Available at: www.jstor.org/stable/42751031. Accessed 16 Feb. 2021.
32. Conn, D., Pegg, D., Evans, R., Garside, J. and Lawrence, F., 2020. The Guardian: *'Chumocracy': how Covid revealed the new shape of the Tory establishment*. [Online]. Available at: https://www.theguardian.com/world/2020/nov/15/chumocracy-covid-revealed-shape-tory-establishment [Accessed 13/12/2020].
33. Crutzen, P. and Stoermer, E. 2013. “The ‘Anthropocene’”. In: Robin, L., Sörlin, S. and Warde, P. ed. *The Future of Nature: Documents of Global Change*. New Haven: Yale University Press, pp. 479-490. https://doi.org/10.12987/9780300188479-041
34. Defalco, Amelia. 2017, "MaddAddam, Biocapitalism, and Affective Things", *Contemporary Women's Writing,* vol. 11, no. 3, pp. 432-451. [Online] Available at: https://academic.oup.com/cww/article/11/3/432/4844921?login=true
35. El Akkad, Omar. 2017. *American War*. Knopf: New York/Picador, London.
36. Elborough, Travis. 2006. ‘*Reality is a Stage Set – Travis Elborough Talks to J. G. Ballard’* [Published in 2014 edition of *The Drowned World*.] Fourth Estate, London.

37. Evers, Stuart. 2019. The Guardian: *Doggerland by Ben Smith – review* [Online]. Available at: https://www.theguardian.com/books/2019/mar/25/doggerland-review-ben-smith [Accessed 7/6/2021]
38. Fazackerly, 2023. The Guardian: Climate crisis deniers target scientists for vicious abuse on Musk's Twitter [Online]. Available at: https://www.theguardian.com/environment/2023/may/14/climate-crisis-deniers-target-scientists-abuse-musk-twitter [Accessed 28/05/2023]
39. Garrard, Greg. 2011. *Ecocriticism*. Taylor & Francis Group, Florence. Available from: ProQuest Ebook Central. [9 September 2022].
40. Ghosh, Amritav. *The Great Derangement: Climate Change and the Unthinkable*. University of Chicago Press. Chicago and London, 2016. Digital, p. 7, 8
41. Goodbody, Axel and Johns-Putra, Adeline. 2019. *Cli-fi: a companion: Introduction,* 2019, First edn, Peter Lang, New York; Oxford. [Online]. Available at: https://www.vlebooks.com/Product/Index/1564621?page=0
42. Green, Caitlin. 2016. *Ravenserodd and Other Lost Settlements of the East Coast* [Online]. Available at: https://www.caitlingreen.org/2016/02/ravenserodd-lost-towns-yorkshire-coast.html [Accessed 21/7/2021]
43. Hall, Sarah. 2007. *The Carhullan Army*. Faber, London.
44. Harris, Robert. 2019. *The Second Sleep.* Penguin Random House, London.
45. Harvard University, 2016. *Stephanie LeMenager | What is Cli-Fi? || Radcliffe Institute* [Online Video]. Available at: https://www.youtube.com/watch?v=P9XuxHtfOxQ [Accessed 28/05/2023]
46. Honeywell, Antonia. 2015. *The Ship*. Weidenfeld and Nicolson: London.
47. Hummel, Katherine E. 2019. 'Strange Kinship Matters: Cultivating an Ecofeminist Ethics of Place in Margaret Atwood's *The Year of the Flood*'. *SLE: Interdisciplinary Studies in Literature and Environment*, Volume 26, Issue 4, Autumn, 2019, Pages 986-1005. [Online]. Available at: https://doi.org/10.1093/isle/isz009
48. Hunt, Elle. 2019. The Guardian: 'BirthStrikers: meet the women who refuse to have children until climate change ends'. [Online] Available at: https://www.theguardian.com/lifeandstyle/2019/mar/12/birthstrikers-meet-the-women-who-refuse-to-have-children-until-climate-change-ends
49. Hunter, Megan. 2017. *The End We Start From*. Picador, London.

50. IPCC, various. 2021. *AR6 Climate Change 2021: The Physical Science Basis — IPCC*. Ipcc.ch. [Online]. Available at: https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/ [Accessed 11 September 2021].
51. Jennings, Hope. 2019. "Anthropocene Feminism, Companion Species, and the MaddAddam Trilogy". *Contemporary Women's Writing,* vol. 13, no. 3, pp. 16-33. [Online]. Available at: https://academic.oup.com/cww/article/13/1/16/5432310
52. Jovanovic, Bojan. 2023. DataProt: *Gamer Demographics: Facts and Stats About the Most Popular Hobby in the World* [Online]. Available at: https://dataprot.net/statistics/gamer-demographics/:~:text=There%20are%203.24%20billion%20gamers%20today.&text=This%20number%20of%20gamers%20is%20expected%20to%20hit%203.32%20billion%20by%202024. [Accessed 29/05/2023]
53. Johnson, Boris. 2020. PM Climate Ambition Summit opening remarks [Online]. Prime Minister's Office, 10 Downing Street [12th December]. Available at: https://www.gov.uk/government/speeches/pm-climate-ambition-summit-opening-remarks-12-december-2020. [Accessed 3/3/2021].
54. Kaufman, Mark. 2020. Mashable: 'The devious fossil fuel propaganda we all use'. [Online] Available at: https://mashable.com/feature/carbon-footprint-pr-campaign-sham [Accessed 15/3/2021]
55. Kierkegaard, Søren. 1843 *Either/Or* [Online]. Translated by Howard V. Hong and Edna V. Hong. Available at: http://sqapo.com/CompleteText-Kierkegaard-EitherOr.htm [Accessed 14/4/2021]
56. Lanchester, John. 2019. *The Wall*. Faber and Faber, London.
57. Literature Works. 2020. *We Interview Ben Smith and Review his Debut Novel: Doggerland* [Online]. Available at: https://literatureworks.org.uk/features/we-interview-ben-smith-and-review-his-debut-novel-doggerland/ [Accessed 11/11/2020]
58. *Mad Max: Fury Road*. 2015. [Film]. George Miller. Australia: Village Roadshow Pictures.
59. Markman, 2018. Harvard Business Review: Why People Aren't Motivated to Address Climate Change [Online]. Available at: https://hbr.org/2018/10/why-people-arent-motivated-to-address-climate-change [Accessed 28/05/2023].
60. Marshall, Ben. 2020. Medium: 'Existentialism vs Absurdism – Explanations and Key Differences of Each' [Online]. Available at:

https://thinkingdeeply.medium.com/existentialism-vs-absurdism-explanations-and-key-differences-of-each-22ae90b4ebde#:~:text=While%20Existentialism%27s%20goal%20is%20the,what%20life%20can%20offer%20us. [Accessed 28/05/2023]

61. Masterclass. 2022. Masterclas: 'Absurdist Fiction: 5 Characteristics of Absurdist Literature' [Online]. Available at: https://www.masterclass.com/articles/absurdist-fiction-guide [Accessed 28/05/2023]
62. MasterClass. 2022. Masterclass: 'What is Nihilism? Definition and Concepts of the Philosophy' [Online]. Available at: https://www.masterclass.com/articles/what-is-nihilism [Accessed 28/05/2023]
63. Mavity, Anne. 2014. *Margaret Atwood: MaddAddam Interview [Online Video]*. Available at: https://www.youtube.com/watch?v=jrpF7rk8qmE [Accessed 12/11/2020]
64. McCarthy, Cormac. 2006. *The Road*. Picador, London.
65. McDonald, Keza and Stuart, Kieth, 2020. The Guardian: Fortninte to Celebrate 350m Players with Massive Virtual Party [Online]. Available at: https://www.theguardian.com/games/2020/may/06/fortnite-now-has-350m-players-with-32bn-hours-played-in-april [Accessed: 6/3/2021].
66. McEwan, Ian. 2010. *Solar*. Jonathan Cape, Random House: London.
67. McGraw, A.P. & Warren, C. 2010. Benign violations: Making immoral behavior funny. Psychological Science, 21, 1141–1149. [Online]. Available at: https://leeds-faculty.colorado.edu/mcgrawp/pdf/mcgraw.warren.2010.pdf
68. Milner, A. & Burgmann, J.R. 2018, "A Short Pre-History of Climate Fiction", *Extrapolation,* vol. 59, no. 1, pp. 1-23. [Online] Available at: https://www.proquest.com/docview/2032395125/fulltextPDF/5C2C507076754277PQ/1?accountid=11528
69. Mitchell, David. 2014. *The Bone Clocks*. Sceptre, London.
70. MIT Video Productions. 2019. *Margaret Atwood at MIT - 'Oryx and Crake' Revisited - 2004 Abramowitz Lecture [Online Video].* Available at: https://www.youtube.com/watch?v=kBbhdEX8OE [Accessed 3/10/2020]
71. Morrall, Clare. 2015. *When the Floods Came*. Spectre: London.
72. Northover, Richard Alan. 2016, "Ecological Apocalypse in Margaret Atwood's MaddAddam Trilogy", *Studia neophilologica,* vol. 88, no. 1, pp. 81-95. [Online]

Available at: https://www-tandfonline-com.hull.idm.oclc.org/doi/full/10.1080/00393274.2015.1096044

73. Orwell, George. 1949. *1984*. Secker and Warburg, London.
74. Parker, Andrew and Irving, Peter. 2018. 'The Risk of Termination Shock From Solar Geoengineering'. Earth's Future, 6, Pp. 456-467. [Online]. Available at: https://agupubs.onlinelibrary.wiley.com/doi/10.1002/2017EF000735
75. Penguin Random House Productions. 2010. *Margaret Atwood on The Year of the Flood [Online Video].* Available at: https://www.youtube.com/watch?v=npamsWwWu0 [Accessed 15/10/2020]
76. Pignocchi, Alessandro. 2019. *La recomposition des mondes*. Anthropocene Seuil, Paris.
77. Oxford, University of, 2018. *Balanced plant-based diets improve our health and the health of the planet | University of Oxford*. [online] Ox.ac.uk. Available at: https://www.ox.ac.uk/news/2018-10-12-balanced-plant-based-diets-improve-our-health-and-health-planet [Accessed 4/11/2020]
78. Rae, Keith and Wilson, Naomi. 2022. *Climate change and mental health: Report from a COP-26 public participation event*. The Mental Health Foundation, Scotland. Available at: https://www.mentalhealth.org.uk/sites/default/files/2022-07/MHF-Scotland-Climate-Change-COP26-report0.pdf
79. Ruddiman, William F. 2003. "The anthropogenic greenhouse era began thousands of years ago." [Online]. *Climatic Change*, vol.61, Dec., pp. 261–293. Available at: https://doi.org/10.1023/B:CLIM.0000004577.17928.fa [Accessed 2023]
80. Smith, Ben. 2019. *Doggerland*. Fourth Estate, London.
81. Snyder, Katherine V. "Time to Go": The Post-apocalyptic and the Post-traumatic in Margaret Atwood's "*Oryx and Crake*". Studies in the Novel , winter 2011, Vol. 43, No. 4. The Johns Hopkins University Press [Online]. Available at: https://www.jstor.org/stable/41319888
82. Spiegel, Michael. 2010. *Character in a post-national world: Neomedievalism in Atwood's Oryx and Crake.* Mosaic 43(3), 119–134. [Online] Available at: https://www-proquest-com.hull.idm.oclc.org/docview/756346203/fulltextPDF/E9A44B60F3704070PQ/1?accountid=11528

83. Statista. 2021. *Imports and exports of coal mined in the United Kingdom (UK) from 1970 to 2019* [Online]. Available at: https://www.statista.com/statistics/370921/united-kingdom-uk-mined-coal-trade/ [Accessed 6/8/2021]
84. Stevens, T., 2021. The Guardian: *Apologist for Snickers: Twitter users hit back against attack on Corbyn* [Online]. Available at: https://www.theguardian.com/politics/2017/jun/07/jeremy-corbyn-labour-how-social-media-hit-back-against-latest-attacks [Accessed 31/9/2020].
85. Suchostawska, L. 2020. Blending Christianity and Ecology in Margaret Atwood's The Year of the Flood. *Explorations,* **8**, pp. 97-109. [Online]. Available at: https://www-proquest-com.hull.idm.oclc.org/docview/2559489077?pq-origsite=summon
86. The Nexus Institute, 2012. *Margaret Atwood – On Fiction, the Future and the Environment [online video].* Available at: https://www.youtube.com/watch?v=5FwVOsDrp7E [Accessed 10/7/2021]
87. Town Hall Seatle, 2013. *Margaret Atwood MaddAddam 10/4/13 [Online Video]*. Available at: https://www.youtube.com/watch?v=k5SBeFlZQl8 [Accessed 4/6/2021]
88. Trexler, A. 2015. In *Anthropocene Fictions: The Novel in a Time of Climate Change*. University of Virginia Press [Online]. Available at: https://www.jstor.org/stable/j.ctt13x1r99
89. Waggoner, Ben. 1996. 'The Holocene Epoch' [Online]. Available at: https://ucmp.berkeley.edu/quaternary/holocene.php#:~:text=The%20Holocene%20is%20the%20name,the%20Holocene%20has%20been%20a
90. *WALL-E*. 2008. [Film]. Andrew Stanton. USA: Pixar Animation Company and Walt Disney Pictures.
91. Wallis-Wells, David. *The Uninhabitable Earth: A Story of the Future*. Allen Lane, Penguin. London, 2019
92. Wright, J., 2021. Harper's BAZAAR: *The Most Common Criticisms of Greta Thunberg on Twitter* [Online]. Available at: https://www.harpersbazaar.com/culture/politics/a29236192/greta-thunberg-criticism/ [Accessed 27 July 2021].

4. Cli-fi Creative Writing Project

Three-quarters of the way through Chapter One of ‘Wyke’: *earlier part submitted to the module ‘Writing the Novel’.*

Ivor felt the onset of calf-cramp as he reached the edge of the barge-market. He knew the traders well. Under the thwart of his canoe, sandwiched between an old dog bed and two rough blankets, were four dozen eggs on blue cardboard trays. He’d given four dozen to the campus canteen. Running under the yoke and rear thwart lay his bow and quiver, and below the stern seat were three dead geese.

The centre of the submerged city had retained its name: Town. Original roadways were kept as channels. Street signs, recovered by bored teenagers, had been fixed above the water. Rafts lined the canals, strung tightly together, moored to anything solid that broke the surface. Fishing lines dangled and caught plenty: an old shoe, throw cushion, sometimes a fish. Flat roofs became allotments, even some slanted ones, Babylonian shelves. Taller office blocks or high-rise flats were luxury apartments. People traded many things, and Ivor had five kinds of currency: eggs, birds, cider, smoke and knowledge.

He hated killing the birds. For years before the flood, he’d not eaten meat, but when a single bird could be traded for a month’s supply of lentils, maybe a few boxes of milk powder thrown in, it was key to the family’s survival. Protein wasn’t easy to come by when the hens stopped laying in winter. They never had the heart to kill one prematurely.

Ivor tied his canoe to the most official-looking raft structure. It floated next to the dock tower, the glass gallery reflected the sun from sky and water, so much it was hard to look at. Harbour Master Tom Mitchell would be talking to a supply ship captain through a radio within. Ivor could see the hulking freight carriers anchored about five kilometres out. Tom was like a neighbour: he lived on a smaller island on the next hill east of Spinney, with a wife, mother-in-law and two daughters. He used to give Ivor a lift in his launch before the phone lines dropped and it got too hard to organise.

The official-looking structure was the Police barge, The Hub, built on a hundred and eighty plastic barrels. It had a deck spanning a hundred square metres, made of tarred wooden planks. At the centre of the deck were two large shipping containers stacked one on top of the other, surrounded makeshift huts and cages, all roofed and neatly felted. The Hub was run by the remaining Police force of the city. They

were led by a woman and two men and maintained good order in conjunction with the remains of the coastguard and harbour master, who had given them fast launches and extra hands. Officers did more than keep law and order, they formed diving teams, doled-out food and tried to maintain local morale. Though the small barges had bric-a-brac and vegetables from the small rooftop operations to trade, The Hub held vital provisions.

In a tatty high-vis jacket and buoyancy aid, Deputy Chief Constable David Hassan strolled over to Ivor and offered a hand to the young man clambering out of his canoe.

“Now then,” was Hassan’s greeting.

“Officer,” Ivor replied, sarcastically tugging his forelock.

“Geese! Lucky we can’t charge poachers anymore, Knotty-boy. You’d be shut up in one of the cages. Eggs as well, eh? Well, maybe I can let the birds slide... again. What’s that, paint?”

“Cider. I’ll need the tub back next time. Any news?” Ivor asked, leaning backwards with both hands on his lower back, giving a stiff sigh before rolling his shoulders loose. Hassan looked at his watch, tapped Ivor on the shoulder with his clipboard, turned his back and strode towards the containers. He was eager to finish a long shift. Ivor followed.

“Still nothing to write home about,” Hassan said, over his shoulder. “Those prats in the airboat are getting a bit more daring, especially after dark. The complaints keep coming but it's not worth sending the launch for. A few are saying that they’re pressuring people in small crafts to surrender goods: stealing. Things have been going missing from the roof-growers' gardens and sheds, tools and the like, but as yet there’s nowt we can do but wait. You want to steer clear of ‘em, especially if you’ve got anything like them stashed away.”

Ivor dropped the geese onto a trestle, before the two stepped inside the lower container, he shrugged and said, “It’s hard when they can go nearly fifty miles-an-hour and I can manage about ten with a tailwind; they capsized me yesterday, when I was going to see a friend. Shot round a corner. I did well to get out of the way.”

‘Going to see a friend’ was code for dropping off packets of smoke: one to a carpenter who’d made Ivor’s father’s paddle and another to the farrier who made arrowheads. “That grim faced kid who usually steers I don’t know, but yesterday a lad I knew from school was on board, Jack Dixon, with another kid who can’t’ve been

more than ten. Jack used to live out near us, but after his parents got divorced, he moved to estates, east of Town." Such estates had been completely swamped in the flood; only high-rise blocks were now habitable.

"Hmmm…" Hassan responded, "We know they're based in one of the high-rises. We've been out there but they've got a place to stash the boat where we can't get it. They made gates for the outdoor fire escapes, fenced the lower balconies, backed them with board, finished them with razor wire. It's a bloody fortress to be fair. They're fast, nimble. Plus, we've no real grounds to confiscate it. We've not got any official authority at all. They're a pain, but no more yet."

"Well, I've come for supplies. I need a new flint rod, and lentils for the next few months. If you've got more cable, I'll have that too: I'll have more electrics to rig up on campus this week and I want to hook up a few more turbines so they can get heaters going through the winter. The hens keep laying a bit with the smaller ones I've tested in the coup at home, so I hope the bigger ones might work in the campus dorms."

Inside the lower shipping container, three young men in lifejackets sat behind pallet-wood desks. Leaning over one, giving quiet instruction to a junior officer, was Commander Janet Mitchell, the police chief and wife of Tom, the harbour master. On the back wall was a row of rust-speckled cabinets, padlocked individually: a small armoury that had never been opened as far as Ivor knew. Radios crackled, words were spoken, papers ruffled, pencils ran across them.

"Evening, Iv," one of the young men said. He had thick, tattooed forearms and a square jaw.

"Rob, you good?" Ivor approached and offered a hand, duly shook.

"Aye, not so bad," Rob Johnson replied. "What can we do you for today?"

* * *

The goods were exchanged, what Ivor brought was logged and what he took signed out: a ten-meter coil of insulated copper cable, four kilos of lentils, two boxes of milk powder and a crate of coffee from who-knew-where; coffee was valuable and rare, but the birds paid for it.

Container ships stayed afloat when nations sank or burned, they became floating towns that could move and trade. Some nations had flourished after the warming really kicked in, generally those with higher altitudes that nobody thought to flee to: New Zealand, Poland, Chile. The Scandinavian countries were safe too, after the

Danes built their wall. In other places there were too many guns, or not enough to keep the migrants out, who were thought to spread pandemics.

Still, some ships came into port to get what they could on the grey market that had sprang up in the floating town of Wyke, and remaining residents knew and exploited this. They sent out diving teams to salvage things like machine components that could no longer be manufactured, they grew what they could, particularly smoke, and rumours said that some even paddled out to try for a place on the great hulks.

What Ivor brought would not be consumed by the officers or residents: they would be traded with freight captains for sacks of grains or pulses. Small portions of hot food were distributed from the Hub in exchange for tokens. The sea captains didn't care where the eggs or birds came from, and neither did the other marketeers who bought them, the lucky ones with whom the eggs and birds ended up. What the likes of Ivor brought could be traded for enough supplies to feed the needy, but only just.

As Ivor unwound his mooring and settled the yoke of his canoe, Commander Mitchell strode out of the containers, black boots bouncing off the deck, black elbow-patched service jumper over navy blue overalls, Police bowler over her tied back hair. She stopped over to the edge of the Hub, put hands behind her back, and gazed over the young man, who sensed her presence and looked up to her.

"Mr Knot, I was hoping you might be able to fit one of these windmills I've heard so much about to power our radio. Our solars are well maintained, but to be honest we need those to charge batteries for the mobile radios on the boats. We need to stay connected to the harbour master's tower at all times, as that is our lookout station. But it gets damn cold in the containers even now…" She spoke with functional composure, even when referring to her husband, to a young man with whom she frequently shared the family a dining table. Ivor smiled a wry smile at her cold equanimity as he stared back, without speaking. Eventually Commander Mitchell said, "Well, what do you think?"

"Of course, Commander. I'll knock it up at the campus, Wednesday. I'm heading back to help the gardeners with something," he fibbed. "If it's not too dark, I'll fit it for you on the way home."

“That shouldn’t be necessary, thank you. I thought you might be producing them on campus. If you wouldn’t mind, you can leave it at the station there, I think Johnson is on duty, Wednesday. Someone here can wire it up.”

“No problem, Commander,” said Ivor.

The commander nodded with her lips pursed together before, turned on heel and walked briskly back towards her offices.

* * *

By the time Ivor was in sight of Spinney, it was twilight, almost completely dark by the time he’d pulled up the boat at the water’s edge. The way back from Town had been quiet, the waters still that mid-September evening. The warming of the planet had meant that, until the depths of winter, there was no need for waders and wetsuits. Rubber sandals, shorts and a waxed jacket over a jumper were all Ivor wore to protect against the elements, almost year-round, and a broad-brimmed bora-bora with adjustable chin-strap chin to keep off the stormy showers, even in high winds.

As Ivor was unloading the canoe, the slow figure of Dale, using his long staff, wandered over, wearing a head torch.

“Welcome home, my son,” Dale said. He drove his staff into the damp clay not far from the water’s edge, then pulled the canoe onto land, as Ivor gathered the piled provisions. Dale opened a folding plastic crate and held it forward. “I can smell coffee! Lovely! Your mother will be pleased...”

“Apparently from Brazil that. Got milk too, and the cable. Not bad for four dozen eggs and two geese. That other one’s for us.” Ivor stood for a moment, sucking in the air, leaning slightly back, hips pushed forward, both hands at his waist. It was lucky he’d returned when he did, he couldn’t have paddled another stroke. He took his grandfather’s knobbly stick out of the mud in one hand, the old man’s elbow lightly in the other, and put one of his broad hands under the crate to take the weight, “Here, take your bloody stick or else you’ll fall. Leave the basket to me and gi’me that bloody head torch, it’s a waste of batteries on you.” With his bow slung across his upper body, he reached and took the torch with one free hand, then awkwardly stretched it over his own head, balancing the basket of supplies as the old blind-man used his stick to begin feeling his way back to the house. “How’s Mum?”

“Great,” the husky voice replied. “She cooked a pie full of, well, beans and stuff, I think. She was hungry but I said I’d wait for you. I think she’s reading in the back room now.”

Ivor saw the glow of a candle from a side window to the rear of the house.

They stumped up the slope as the last of the purple light faded and closed the door on the still black water.

Chapter Two

Searing light split the gap in the double-lined curtains. The warming of the world meant that autumn was milder, but mornings were still cold on Spinney, the tiny island to the north of a dark continent.

Ivor sat up and placed thick-socked feet on the shaggy rug. The tidiness of his room was something to be admired. There was something obsessive about it, stemming from his platinum will: the logical fixedness of the order of his mind. He rocked up to standing, a little bent and groggy, and doddered out onto the landing.

The first job was to light the AGA, then take wood from the store. There would be wood in the house the night before, that Dale or Freya had brought in, but only enough to burn until mid-morning. Ivor heard the wind's warning whistle as the house blocked its path. He went downstairs quietly, as if not to wake anyone, but Dale was up, leaning against the shelf on the right-hand wall of the kitchen, just inside the door from the hallway, as if waiting to make somebody jump. Ivor didn't.

"Morning, son," the old man said, eyes staring straight ahead. He was taller than Ivor by half a head, broad in the chest and shoulders, with a flat stomach. His face had strong features: a broad nose from which silver hair sprouted, big ears, cloud-white curly hair, and milky pale eyes. He saw little but change from light to dark.

"Morning, you lit the fire?" Ivor asked, opening the door of the AGA then squatting to warm his hands.

"Your mother did. Won't let me near it now. Good job she came through when she did last week, otherwise the whole house might've come down!" He chuckled, a little awkwardly.

"She up then?" asked Ivor.

"She just gone to let the chi-"

"Morning, Iv," Freya scuttled into the kitchen with a basket of eggs, dressed and ready for a day's work. She wore overalls, and a dirty lab coat, once worn on shifts in the teaching hospital. Deep pockets were useful for manual work. She was olive skinned like Ivor, whereas Dale was suntanned like most but a little pink. She was broad and strong like her father and not much shorter than Ivor, with iron grey hair cut short with a straight fringe. "Think I might come out with you this morning, if you don't mind." It was a statement not a question. "We might squeeze in two trips if

we both paddle, though it's blowing a bit: I want to go to Basil's and see that his hand is healing okay, and then I need to go to the Mitchell's to take Erin's cast off and see if she needs another. And I saw that coffee: brill! I've ground some. It's bit coarse, so just leave it in a little longer."

Ivor grunted in reply, still sore from a long day on the water. Other than in his skin tone and dark eyes, he didn't resemble Freya, nor had he inherited anything physical from his grandfather, but they shared a tendency to rise with the sun, a keenness for hard work, and practical intelligence. Ivor was lithe and average height like his father and had played in the backs at school, whereas Dale had been a lock. Ivor's mind was quicker than his feet, and at times he seemed to do things almost too slowly, but it was with efficiency, stamina, a focused eye, and firm grip. He got things done.

Freya went on, "So, the chickens are done, sixteen eggs, not bad, I'll bring in another basket of logs for Dad and then we can go. After some breakfast, if you want?" It wasn't a question.

"Hang on," Dale butted in, "I think it's been three days since he shifted any weight."

"Grandad, I paddled that canoe around twelve kilometres of water yesterday…"

"And why do you think you found it so easy?" Freya said. "Your grandad's right: you both need to keep your strength up. I'll make breakfast, after I've done a bit of weeding."

Ivor sighed in acquiescence. Dale had already made for the front door and was donning Ivor's wax jacket, staff already in hand. "I'm sure my jacket's shrunk."

"That's my jacket," Ivor said, realising he should have noticed Dale was wearing his tracksuit.

* * *

After Dale had put Ivor through his regime in the barn, where the lifting platform and rig were set up, the young man lay in a plunge-pool that the two had engineered in the stream, made of old retaining blocks, like their fire-pit, but larger. Dale lifted a bit too, after he'd listened to his grandson suffer. In the times of unlimited hot water, Ivor wouldn't have dreamed of bathing in an icy cold stream, in September. The heat-source pump still worked but they didn't like to over-work it.

As he headed in for breakfast with his shirt around his shoulders, a wisp of steam followed behind.

* * *

Around the table, they talked as they ate.

“How’s the campus going?” Freya asked.

“Fine.” Ivor swallowed, “Just the same really. Things keep ticking over. A few kids are being taught basic survival stuff by a mix of lecturers and students, but mostly they just work. Like here. Never done though, is it?”

Dale scoffed. “Today I think I’ll start sowing Field Number Two. We’re running low on oats, so I’ll grind some more grain and make up a few loaves for one of you two to pop in the oven tomorrow morning.” The fields had belonged to other properties before. They sloped up to the grounds of Spinney, a house that had sold off its holdings long ago, only to fortuitously gain them back. Dale would walk up and down two each year, that had been left fallow the year before, blindly sowing his seeds. After the reaping, making flour was easy enough. Just put the wheat in a blender: rough as saw-dust but did the job. “I think I might even try to make a wheat beer this autumn. Tomorrow,” he continued, “I think we’d best wipe down the solar panels. It hasn’t been done since last month.”

“Can I do that Thursday, Grandad? I’ve plans at the campus tomorrow.” Ivor said, as discreetly as he could.

“You only saw your father there yesterday, why do you need to go again?” Freya asked.

“They’ve got a pest problem, I said I’d take them some cider to make some slug traps.” He replied.

“My cider wasted on slugs?” Dale squawked, in mock outrage. “Can’t they just go round and pick ‘em up, throw ‘em over the sides?”

“They won’t need much for a few traps Grandad, and we’ve still got barrels untapped. If you say you’re gunna make beer as well, then I doubt we’ll miss it.”

“Right,” Dale tutted. “Well, you best bring back some of their oranges and lemons in exchange.”

“Well, son,” Freya interrupted, before the mock argument became tedious. “Would you rather go to the Mitchells’ first or to see Basil?”

“Baz’s. Wind’s blowing in from the west, so: we’ll paddle against first, then back past ours to the Mitchell’s. By the time we leave their place tonight, it’ll have dropped.”

* * *

The westward journey to Copse took over an hour of near-continuous paddling. Ivor was glad of his mother’s help as the wind smashed against the canoe’s bow. It was made harder by the drag of a full boat, stocked with sacks of oats and potatoes.

Copse Veterinary Surgery had been part of a nature reserve and deer park: it had become a sanctuary after the flood. It was probably the largest wooded area for over two-hundred miles in any direction, on an island of perhaps sixty square kilometres.

The canoe eventually slumped against the shore of the island’s small inlay to the northeast, and Ivor pulled it right out of the water and hid it behind a low hedge, after emptying the provisions. He had not brought his chain, not expecting to need it.

Basil Greer lived on this island with his sister, Susie, and her partner, Thora. Basil was a good man, a former vet who had inherited his family business. In the early days, people had taken their animals to Basil’s practice to have them put down: cats, dogs, horses, cows, sheep, goats, pigs, even a few alpacas. He’d refused at first but realised that he probably had to do something. He began adopting some animals, keeping at least two breeding pairs of each species, butchering those that eventually died or had to be put down. As the food he’d retained or recovered from affected pet stores and supermarkets ran down, he smoked meat in a smoke house, and stored it for the remaining omnivores. It seemed pointless to Ivor for a long time but one day he’d realised: if a person had dedicated their life to something, and their forefathers had done the same, it was a small sense of purpose to cling on to. Invaluable after The Great Change.

Ivor had wanted to be an engineer and had been prevented by the final stage of The Change. It cut his family and community off from the rest of his former nation, and any ambitions. Patriotism was gone, government was no longer effective, and the rich had already left. Ivor learned what he could from books and with Dale’s instruction and encouragement, he began using his skills to help others.

Basil had done the same, but he viewed animals as others too. Eventually, word spread that Basil had begun to breed livestock on the small oasis. During The Great Change, pandemics that killed millions of humans had also decimated

livestock. Food shortage meant more millions starved, while some continued to eat steaks. Even after those years of the population thinning, some clung to meat-eating. Basil didn't like farming livestock, but when banks collapsed, trade became necessity, and the only other thing Basil could trade were seeds. They went for more than livestock, as governments from not only their own continent were desperately trying to grow more forests to create new carbon sinks. Copse had become important. They all knew how much.

The deer became a problem though. Corralling them was impossible: they'd jump any fence put up and needed to roam and graze far more than the other livestock anyway. Cutting enough of the trees to give them a big enough paddock would take many hands and would be dangerous work. Basil had tried to hunt them with a bow that Ivor and Dale had made him, but he wasn't a good shot. Thora was a little better, but sharpened sticks wouldn't kill deer.

* * *

Freya and Ivor walked uphill on the weedy gravel path between the stables, kennels and cattery. They eventually reached a cleared encampment far enough away from the wooden structures and cages to avoid the smells. Below two impressive tree houses in neighbouring oaks, Thora sat on a long log. She was a strong, tall woman, in a denim shirt and combats. She was surrounded by files, pliers, and a battery powered multi-cutter, noisily scraping, and cutting, then sharpening against a whetstone.

"Hi, Thora!" Freya shouted.

Thora gripped a large knife. Recognising Freya, she relaxed. She put the blade down. "Alright, how's it going?" she replied. Ivor lagged behind; sacks stacked on both shoulders. As they neared the centre of the clearing, a ewe and two lambs trotted away, bleating.

"Oh, you know," Freya sighed in reply.

Ivor said nothing. Looking glum and tired he dropped the sack next to a trestle table. His body ached. On the table was a hacksaw, planer, sandpaper, and numerous two-and-a-half-foot barrelled arrow shafts, fletched skilfully with grey goose feathers.

"Well, I've at least got something that might cheer *him* up: look." Thora picked up one of the small pieces of scrap metal that surrounded her and under-armed it to Ivor.

Turning it over, he saw what she'd been making: arrowheads.

"Pretty menacing. Why would this cheer me up? Grim…"

"I thought you liked using that bow. You're a bloody good shot. The deer are running riot, there must be close to forty now: it's too many. We're gonna have to do something about it and we were hoping to employ your services," said Thora, typically blunt, matter of fact.

"Nah, no thanks," Ivor said, wincing at the idea, shaking his head.

"You shoot birds, what's the difference?" Thora asked.

"I hate killing them, it's gross. Plus, who knows what those bits of scrap metal will do to the arrows, probably couldn't hit the side of a barn with one of them on the end."

"I tested a few earlier," Thora said, nodding towards a nearby tree. Three arrows protruded from the thick bark.

From one of the treehouses, a telescopic ladder rattled down. Basil began descending hurriedly as if late, clearly favouring one hand.

"Morning!" he called, well before reaching the bottom. One of his hands was heavily bandaged and the eyes winced from behind the bushy black beard. "Shall we get to it then? I'm sure you two have plenty to do." He was breathing hard and sat down the log next to Thora. He'd been bitten by one of the dogs.

Sheba, the female German shepherd they had at Copse was not friendly. She'd been found left on ruins of the bridge over the estuary; no doubt dumped by someone who couldn't feed her anymore. The bridge had connected the north and south banks of a great estuary and had two steepling towers. Now it connected water to the same water. Ivor had been returning from Town one day and spotted Sheba lying on what had been the northbound carriageway. He thought she might be dead, but she'd lifted her head. He'd told Basil, who brought her back to Copse, wrapped in a blanket, shivering and emaciated. She was now lying in the same pose as on the bridge, in a large nearby cage, where she spent most of her days: too prone to killing chickens. Basil had been bitten trying to take one off her. Gruff, the male German shepherd, sat faithfully next to her cage, tongue out, panting. He was a big dog too, but too docile yet to make a move on his arranged mate.

"How's Sheba doing?" Ivor grinned. His mother tutted loudly, rolling her eyes.

Basil chuckled, "Yeah great, starting to respond to commands now. Gruff sets a good example, the suck-up. Just can't trust her to be left when the chickens are

out; I let her out in the evenings though and she comes back when we call. She'll like it less when we keep them in more over the winter. Gruff might finally get his chance."

"Hmmm, good luck to him," Ivor said.

Freya began unbandaging Basil's right hand. She'd had to give him eight stitches and seemed to be happy that the wounds were not infected. She cleaned it with some apple cider vinegar, rubbed on some lavender oil and put on a lighter bandage, saying that he could of course take the stitches out himself whenever he felt like it.

"Probably could've put them in himself, if he wasn't such a wuss," said an aquiline, dark-haired woman, picking her way out of the treeline with a basket of wild garlic and two border collies. Susie: Basil's sister, Thora's partner. One of the dogs broke character completely as soon as he laid eyes on Ivor. The dog sprinted to him, shook with excitement, writhed in pleasure at Ivor's feet, as he knelt and gave the attention craved. Alfred had become a ward of Copse, since not long after the flood, and was invaluable in helping control the other animals.

"You're a soft dog, Alf," Freya said. The dog immediately jumped up hearing his name and gave her hand an affectionate lick. He had been the dog at Spinney, an indulgent Christmas present for Ivor when things were starting to turn. Ivor and Dale trained him well, but Alfred had never had to really work until he came to Copse, so he still had a soft side.

"The deer are on the north side, quite well grouped. Like sitting ducks…" said Susie.

"Well, we best give this a go then, Thora. Got a few arrows ready?" Basil said, getting to his feet and avoiding Ivor's gaze.

"I've got thirteen, hopefully it's my lucky number. But you can't pull the bow with your hand."

"I think I can, grab your bow and I'll come along with you." As Basil turned his back, the three women looked at Ivor expectantly.

Ivor raised both hands. "I'm not doing it. I can give Baz all the tips he needs but I'm not killing-" His voice trailed off.

Freya spoke softly, "Ivor: I know you don't want to, but it needs to be done. They're taking the bark off trees now; you need to stop them before they ruin things here. If you don't cull a few, the other animals might not survive the winter, especially

the two calves and the foal. Nobody shoots like you. If Thora doesn't hit the spine or heart, then she'll have to follow a wounded deer for days until it's dead, if the stag lets her near it." She had persuaded Ivor, who looked nonetheless angry. "Basil, stay here: you're useless!"

Basil looked taken-aback from behind the trestle table, stopping still as he attempted to string his bow.

There was a long silence, Ivor squatted on his haunches, looking at an arrowhead in the palm of his left hand. He took it between finger and thumb, then ran his right index finger down an edge. The point of the barb just pierced his skin.

"Go on, son. Basil hasn't even mentioned that they carry Lyme's disease and who knows what else nowadays," Freya said. "I don't need to tell you; we all have to do what's necessary."

Moments of awkward silence folded their arms.

Eventually, Ivor let out a long sigh. "Alright. You stay here Baz. Thora can show me where they are." At this Thora stood and walked over to a small shed to the side of Basil's tree. "She's tougher than you are anyway. If I don't hit perfect shots, I'll need someone to hold the beasts while I finish them off."

Thora returned and threw the now strung bow Ivor had previously brought back to its maker. He caught it firmly by the shaft.

Basil was visibly relieved. "Ok, go for the hart if you can: he's had long enough and there are a few younger stags who need to vie for top spot."

Ivor had already started following Thora into the wood.

"Bring two stags back if you can!" Basil called after them.

"Fuck's sake…"

* * *

They'd managed to find a young stag midway through the woods, only a kilometre from the camp. The closeness of the surroundings meant there was loose, spongy moss underfoot, and Copse was a breeding ground for birds, whose constant calling silenced all else: a trackers' paradise. It was another sunny day, if breezy, so they could see from a good distance, and because Copse was small, the deer were quite used to the distant view of a vet and or one of his two assistants.

"Notch an arrow, Thora."

She looked at him as if to protest.

“Don’t worry,” Ivor whispered back, “This is target practice.” He already had an arrow nocked and was waiting at the next tree. “Ready?”

Ivor let Thora settle into her stance; she drew back, inhaled slowly, went still. He raised his own bow and drew back, quicker, whispering, “Three, two, one-”

The sound a bow makes is like snapping a sapling, nothing more. The stag crumpled after the fractionally later sound of two heavy thuds, slightly offset as Thora loosed momentarily after the experienced marksman. She turned to look at where he stood next to the tree to her left, exhilarated after hitting her mark, only to find the young man had moved, surging forward through the moss, holding his bow by the shaft in his left hand, knife drawn in his right. She followed.

Ivor knelt over the beast, feeling the neck: no pulse. He exhaled heavily and looked up at his hunting partner, as she looked down the kill. Ivor’s face was grim, and before he turned his head back upon the stag, he’d noticed a thrilled look on Thora’s face. It was a look he didn’t like.

Eventually, Thora turned upon Ivor’s grimacing face and her thrill quickly turned to a vacant kind of shock. She turned away and retched.

He looked at the two puncture wounds. One was a bad shot, into the front left shoulder. If that had been the only hit, it would have taken days for the beast to die. It would have been a painful death, a death from slow immobilisation and eventual dehydration. The other hit couldn’t have been more perfect from side-on. It’d pierced the back of the neck, a hand’s width above the shoulder joint, dislodging a vertebra and killing the deer instantly.

Ivor pointed, “Here’s where you need to hit them from the flank,” he said. Reaching round, he continued, “Here, if you can get a straight-on view, the heart and gullet, so next time: work your way around for an easier shot.”

“Ok.” Thora wiped her mouth with the back of her hand. “How do you know these things?”

“Well, isn’t it obvious?”

* * *

Thora had been a PE teacher at a local school before the flood. She’d moved into the big house by the now submerged surgery, to live with Susie, before everything happened.

Basil had lived closer to the campus, and taught students there while working at the practice on weekends, which was otherwise managed by his sister. His wife and son had been caught in a pandemic before the waters had risen. Ivor didn't really know him as anything other than the local vet before that. Freya occasionally said hello, exchanged pleasantries in a corridor on campus. They'd found out after the flood what a tragedy he'd lived through, and his unmentioned mission to keep caring about something.

Thora had also been a field athlete before teaching, a javelin thrower, and a back-row for a local rugby team Ivor had occasionally watched. He remembered her as a ferocious defender. She matched him for size and strength, in fact: in the upper body she had proved in some ways stronger, once beating Ivor in a muscle-up competition in the barn, with Dale clapping and laughing at the result, wishing he could have seen her beat his grandson. She came to train at least once a week, and Dale usually let her do as she pleased. It was at Spinney that she made Ivor and Dale show her how to make her own bow, after they'd gifted Basil his.

Ivor had complimented her on her first kill, but she didn't accept his compliments: she knew she'd shot poorly. They agreed that she would carry the carcass back and he would go on and try to find the alpha. He helped Thora heft the awkward carcass onto a sled they recovered from not far off.

"Thanks, Ivor, and good luck. Take your time," she said, before trudging off with the kill.

* * *

Soon enough, Ivor closed on a small clearing of ash, beech, and oak. There were several grazers, a few fawns frolicking and playing. The big stag was just off-centre, the size of a small horse, over two meters tall and two-hundred kilos.

In truth, it was too easy for Ivor, not that he knew it. His name even meant yew, in Old Norse, or archer, bowman. He didn't know, there was no internet to check anymore.

The great hart stood at forty-five degrees from the hunter's vantage and was slightly shielded by its hulking left shoulder. Ivor waited as the kingly creature turned to look straight at him for a moment. Before the great champing teeth could cut another blade of grass, the stag half-reared with a guttural whinny, then slumped on its side. The rest of the herd bolted. It moved as if stretching its forelegs for a moment, and then stilled. The rest of the bevy bolted before it stopped moving.

The hunter breathed in a great, juddering sigh, with tears in his eyes.

* * *

Ivor skirted the edge of the clearing, taking up two fallen branches of roughly equal length and diameter. He lashed these together with some para-cord at one end. He could hold the other ends in either hand outside of his hips. He dragged the improvised sled next to the dead stag, pulled out his arrow, fortunately without breaking it, and closed the soft eyelids over the stag's dark eyes. On his knees, he used two more lengths of cord to tie the four hooves together, then he rolled the carcass onto his improvised sled. It took all his strength, and he stood panting over the carcass and sled, his clammy, calloused hands resting on his knees.

Over his heavy breathing, he thought he heard a bee, buzzing not far off. That would be a strange sound, as the nearest hives were at the other side of Copse, six kilometres or so away, and at that time of the year, even in a hotter climate, he thought that few bees would be able to fly that far.

Then he realised, it wasn't a bee at all.

He bent and picked up the bow and the quiver. He had six arrows left of the seven he had started with, the first he'd shot had cracked when pulling it from the earlier kill. He hurried towards the humming, and he found what he was expecting.

The hum turned to a buzz, then a growl, before the engine was cut, and the whirring of the airboat stopped as it drifted closer to the shore.

One of the three-man crew had already thrown a grapple into the muddy clay bank before the meadow leading to the edge of the trees. Ivor looked on, breathing deeply, from five trunks back, slightly uphill, under the shadows of the branches.

The grim-faced kid with the buzz-cut and scared lip was there, the youngster too, and this time, the third was an older man, with a tattoo on his neck, leading up to the jaw. The older man was first off, followed by Grim-face who kicked at the grapple, checking it'd fixed. The older man casually surveyed the tree line for a few seconds, hands on hips, double teapot, then he turned and took a long, thin object from the boy. It was clearly heavy, metal, and sleek. The tattooed man wound a strap around one arm and secured the butt of the automatic rifle above his thick bicep.

Ivor nocked and loosed quickly, and the arrow bounced off the anchor, half of which still stuck out from the clay. It pinged off and Grim-face jumped so much his feet skated in the mud and he fell flat on his back. The youngster had ducked behind

the seat of the airboat, but the older man showed his experience, immediately opening fire on the tree line. Three bursts with the automatic rifle, twenty yards or so to the left of Ivor. It only took one to terrify him.

After many a quiet “Fuck, fuck, fuck,” Ivor held his breath for ten seconds before turning to look past the trunk he leaned against. The man advanced, looking down his rifle, Grim-face behind him, holding a handgun.

“Great,” thought Ivor. He moved low and quick, three trunks closer to where the shots had been fired, nocked, and released, burying an arrow six inches into the fibreglass hull of the airboat.

Another burst from the rifle, closer this time.

Ivor scrambled back past his first tree, as the two gunmen continued bursts of fire, closer again, sending splinters flying.

Grim-face had panicked and emptied the magazine of his handgun. He was clicking the trigger even after the older man turned to look at him, with a brief gurn of disgust.

Thwack!

Another arrow sank into the fibre-glass hull, and this time, the youngster on the boat let out a high pitched, squealing yelp.

“Back on the fucking boat, now!” The accent was thick. Not local.
Grim-face didn’t need telling twice, not even stopping to loose the grapple, he cached himself behind the seat, with the boy. The older man grabbed a protruding end of it and pulled hard, threw it onto the deck, then let a final burst off into the trees, waded-in and with a firm push through the shallows, he jumped on. Grim-face hit the accelerator.

The man looked back and tapped Grim-face on the shoulder. A brief exchange and the boat began to turn, circling the island.

“Shit!” Ivor belted through the trees, knowing that if they saw anyone on the shoreline, it could be bad. He reached a rocky area that split the trees, down from which trickled a stream. Calves burning, he sprinted to the top of the fir-lined slope. From it he could hear the boat close, just out of sight behind an outcrop half submerged trees.

As it rounded the salient, it turned hard into a protected inlet, where the rocky stream trickled into the flood water. The air boaters surged towards the rocky bed of the stream.

Ivor nocked another arrow and held the bow down by his waist. He waited.

Only seconds before they'd be in range.

He inhaled, drew, and loosed an arrow that sank its barbed edges into the central hub of the airboat fan. The sound was a terrible mix of screaming metal with the rattle and crunch of the arrow shaft caught again and again in the grill covering the blades. Grim-face slammed his palms against his ears, lost his balance and fell over the side. The lamenting boat chugged on as best it could, before the older man cut the engine.

Ivor's breath caught in his throat. He only exhaled when he saw the younger man begin to swim towards the drifting boat that the older man turned with a paddle. Grim-face made it just before the man had snapped off the remainder of the arrow shaft. The child still crouched, shaking and terrified, behind the seat of the boat. Grim-face pointed towards the trees and the older man grabbed him by his soaked collar, before throwing him roughly down onto the deck. He tried the ignition key, the engine only grumbled, the blades stuttering. He grabbed the back-up cord of the engine, and three hard pulls later they went away, hampered, horribly noisy, but moving.

Chapter Three

Ivor stumbled back to the tree houses in a cold sweat. The dogs were raucous, champing at the cage doors, sensing danger. The horses whinnied in the stables. The other free roaming livestock were nowhere to be seen. The German Shepherds, Sheba and Gruff, rushed at him, hackles up, growling and barking, before the latter eventually realised who it was, wandered over with a whine and licked Ivor's empty left hand. Sheba backed off, growling quietly still.

Basil emerged on the terrace of his treehouse and dropped the ladder down to the camp. He half-climbed, half-fell to the ground and ran toward Ivor, unthinking. Grasping Ivor by both shoulders, Basil looked him up and down, then stared open-mouthed at the young man's drained face.

"I'm fine," said Ivor.

Basil embraced him in relief, then turned and shouted, "You can come out!"

The others were in the rear compartment of the kennel that housed Sheba. Thora emerged holding an axe and her hunting knife. She slipped fingers through the bars and unlatched the door. Freya sprinted to her son and grabbed him, roughly, sobbing before she'd even touched him.

"I'm fine, mam, ger-off, will you?"

"Who-"

"What did they want? Did they come on the island?" demanded Susie, who had stalked behind Freya, seeming the most composed. Thora still held a weapon in either hand and was wound up like a coil. Freya wouldn't let go of her son and carried on crying in relief.

"I'm guessing they'd come to hunt. There were three of them, two men, one boy. A rifle and a handgun between them."

"Guns!" exclaimed Freya in disbelief between sobs. "How have they got guns?"

"It was easy enough to get a licence before. You can trade for all sorts in Town if you know who to ask," Basil said.

Thora looked furious.

"I never thought we'd need them: I'm a vet, not a soldier. Putting down animals is a little different to putting down humans," Basil said, in defence.

Ivor dropped his quiver on the ground, only two arrows left.

“Where are the other arrows?” Thora noticed.

“In their boat.”

“Ivor! You shot at them?” Freya flapped wildly around her son’s ears before Basil restrained her.

“Iv, I’m not sure that was wise. I mean, we’ve got too many deer, you know, that’s why you were out there in the first place.” Basil seemed irritable now, in support of Freya, who he continued to restrain, her face like thunder.

Susie chipped in quietly, “And how long before they took a sheep? Or one of the horses? We trade these animals for medicine Basil, for batteries, for food. What if somebody took a fancy to me, or Thora? Things have been good since we got settled here, but how long did you think it would last?”

“I’m sorry Baz, but I think Suz is right: we’ve been lucky here. You don’t go up to town that much but when I’ve taken the boat, I’ve come to realise…” Thora left the rest unsaid. She walked over to a log and sunk the axe into it, before sheathing her hunting knife and sitting down, desolately.

“Do you think they’ll be back? I mean, they had guns, for god’s sake!” Freya fretted, and the others wondered the same.

“I’m going to make some tea.” Susie pottered off to the tarpaulin, under which a field kitchen was laid out.

“They probably went back: Sergeant Hassan said the airboat launches from the tower blocks to the east. That boat’s their most valuable resource: no launch can move across these waters with the same amount of speed and agility. They might be caught by one of the Commander’s launches on open water, but they lose them in the narrow channels, or in the marshes, every time.” Ivor sat on the long log next to Thora, hugging his knees, the colour returning to his face. Thora had carried on making the arrowheads.

“How do you know all this?” Freya asked, bemused.

“I trade with people, mam; I pick up news in town.”

“You don’t know what trouble you could’ve caused, you stupid boy!”

“Freya.” Basil stood between mother and his son; palms slightly upraised, “For all we know, they might not come back. From now on we’ll just be a little more cautious. We’ll make sure that the ladders are up when we’re off the ground, and we’ll keep Sheba and Gruff nearby. The Dobermans will be back out soon too, their pups are getting a bit more adventurous. If we hear that boat again, we’ll be straight

up the ladders and we'll leave our little canine welcome party on the loose. There's a hatch under one of the stables, it's an old store, we might even be able to hide in there. God knows what it was for, priest-hole maybe. I don't think they'll be back though, and we'll burn those bows, I think. At least then we have deniability."

"I shot the stag too; I'd better go and get him back here."

At this Freya scoffed and went to help Susie in the kitchen, turning her back on them.

"I'll come with you," said Thora, downing tools, leading the way into the trees.

Ivor stood, his legs shaky. "Baz... I'm sorry, mate. I can stay here a few nights if you want... Think about it anyway."

The older man gripped the Ivor's shoulder with a firm hand as he passed, before letting him disappear below the canopy of the trees.

* * *

When Ivor and Thora pulled the stag into the clearing half an hour later, things were less frantic. Basil had already hung the smaller deer by the rear haunches and gutted it; Susie had put the stinking offal in a charred cooking pot over a small fire away from the camp. Cats sat in the trees or stalked through the grass cautiously. Alfred sat loyally with Freya, looking up at her, panting, as she sat silently, sipping tea.

Ivor then explained what had happened, how the boat was damaged. The others found it hard to believe but knew he had no reason to lie.

"At least now Janet's got an excuse to stop that airboat. She might have even picked them up on their way back if it wasn't working right. If they're carrying weapons without permits, then she'll be able to arrest them. It's still national law," Freya said.

"Not sure permits count for much nowadays anyway..."

"Oh, son!" she half cried, "I feel something set in motion today." She ruffled Alf's ears and stared into the eyes of the oblivious animal. "I suppose we've had it better than most, so far. Don't let anyone see you with that wretched bow from now on: I told your grandfather that you never should have been playing with those when you were still a teenager! Now look where it's got us."

"I don't know mum... don't know what came over me. I just felt like-" Ivor's words trailed off.

“You felt like you had to do something. Fight. You’re just like your father, and grandfather too. Finish your tea and we’ll get on to the Mitchell’s,” she said, bitterness lingering in the finality. Ivor threw his tea in the grass and walked off to get the canoe ready.

* * *

“Well,” said Basil, walking over with two haunches of the deer, as Freya and Basil were stowing their bags. “You’d better take these with you. I know Dale would love a bit of game, and I’m sure old Granny Mitchell will know what to do with the other. Dogs’ll be kept fed for weeks on the rest. I’ll have a long afternoon tomorrow, cutting the big one down to size. Think if I keep the sinews, I might be able to make some better bowstrings... We’ll leave Sheba and Gruff out tonight.”

Freya shot Basil a deadly look.

“I think we’ll at least need to cull the herd by another ten or so, that’s all,” Basil continued, defensively. “Otherwise, it’s like I said…”

Ivor stood up and said, “I’ll come back Thursday or Friday, check in. Maybe we can ask the commander or Tom about getting a few radios. Might help us all stay in touch.”

“Well, if you take these with you and make sure Janet or Tom take them into town, they might be able to trade them for something useful.” Basil handed an old tote bag full of acorns and chestnuts to Ivor. They were beautiful, waxy, shining out of the bag, green and brown, like magic pick and mix.

“Thanks,” said Ivor.

Thora had wandered over, with a long, strong arm around Susie’s slim shoulders; they came to say goodbye.

“Now, all of you, if you want to get in the skiff tonight and come and sleep at the house, you know we have more than enough room. It might be a lot safer-”

“That’s very kind, Freya, but I will definitely be staying here. I wouldn’t like to leave the animals now, especially if…” Basil didn’t need to say more.

Susie said, “You’re an angel Freya, thanks,” looking briefly at Thora, “We’ll think about it.”

Thora frowned.

“Come on then,” Ivor sighed, slinging the bag of acorns over his shoulder, and trudging off towards the water’s edge. His mother followed, trying to smile as she turned and waved a final goodbye to their three neighbours, who waved back.

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The trip to the Mitchell's took the same amount of time as the trip to Copse, despite being twice the distance. The canoe scudded along on the ebbing tide, but by the time Ivor had tied the canoe to the jetty of Mitchell's Landing it was still late afternoon, sun low across the water.

The Mitchells lived in a large house topping a steep bank close to the old, ruined bridge; the north suspension tower steepled nearby, a hundred metre obelisk looming over. The house was brick-washed in fading rose pink with two symmetrical bays and a double garage that was now a boat house for the old river rescue launch the coast guards had left behind when they went off on orders to stop immigrants crossing the channel.

The jetty was new. Dale and Ivor had helped Tom and Janet build it (Dale's role had, as always, been advisory and supportive). It meant that Harbour Master and Commander Mitchell could continue to commute to and from the dock area of Town. Ivor used to babysit for the two girls, Erin and Eva: they were like cousins. After Erin had read *To Kill a Mockingbird* one summer, she'd rechristened her family home Mitchell's Landing. Eve, the younger, ran out to meet them.

"Hi Aunty Freya!"

"Hey, you!"

Janet followed Eva, "Hello!"

"Ah, Janet, not working today?"

"No, I thought I'd take the day off, the boys can handle it: I'm sure." She walked slowly towards then, arms folder against the dying wind.

Eva had taken Freya by the hand and began to almost run her back to the house through the front garden gate, passing her mother, and telling Freya, "You have to taste the cake that me and Granny have made!"

Janet stopped opposite a dazed man. "Now then; I saw something interesting this afternoon."

They were eye to eye.

"Go on," said Ivor, feigning ignorance but knowing what was coming.

"The airboat. It looked like it'd been fired on, wasn't running properly. Arrows puncturing the hull." Janet waited, before she had to press on. "Did they try to stop by Spinney? Or hold you up on the water?"

“Neither,” Ivor said. “I had a little run-in with them at Baz’s, not that they knew it was me...”

“Copse? That’s a way for them to go...”

“That’s what I thought. We were taking some supplies; mum was going to check on Baz’s hand. He talked me into culling a few deer. I didn’t like it, but I liked it less when three of those lot pulled into the far side of the island. Couldn’t exactly dial the emergency number, could I, Commander?” He looked down and toed the dirt.

“Well, why do you think they were at Copse? I mean, part of it is still the deer park that was public land. Basil looks after it all, but it doesn’t necessarily mean they were trespassing. It’s hard for us to take anyone to the mainland now anyway. It’s only really acting with intention to cause harm, or worse, that we can arrest people for, and you know that people are less and less likely to come quietly. Anyway, what’ve you got to say for yourself? You were firing at them, why?”

Ivor was irked. “I wasn’t going to kill them, Janet. They had guns.”

“Guns?” she clearly found this news shocking. “I’ve not heard anything about guns… not a whisper from anyone on the barges in Town.” She was visibly worried. “Well, they couldn’t have come from the ships: everything goes through Tom, and then gets checked by my team. Are you sure?”

“Bloody hell, Janet. They fired at least fifty rounds cracking into the trees before I managed to scare them off. Mum was fucking mortified.”

“You’re joking me - was anyone hurt? Basil, Thora or Suz?” Anger was in her voice at first, but she remembered Freya’s apparent ease.

“No, no. It was on the northwest side, not near the camp: they must have known it was the quiet side, why else would they have gone all the way around? But they were going there, with guns, an older man with a rifle and that kid with the scar on his lip had a fucking Beretta. They had that kid with them too, their mascot that always rides around with them, skinny little runt.” He turned and walked sulkily over to the jetty, hands buried in his pockets, the brim of his hat pulled low. From a tin in his hip pouch, he took out a smoke. He slumped down on the boards, laid down the tin on the boards between his thighs, and lit some wood shavings with his flint rod. He put to his lips and lit it with a smouldering curl of kindling.

Janet had followed him at a steady pace, not taking her eyes off him. When he’d been a teenager, she had first come across Ivor as a senior officer during The Change. Little Ivor, twelve at the time, had been found on his own, wandering the

streets not far from where he lived, before the family settled at Spinney. It was the early hours of the morning, and he'd stopped as soon as the police car had pulled alongside him. It was during one of the pandemics. When they asked him why he was out in public, he said that he just couldn't stay indoors any longer, and that he thought it was least dangerous to sneak out at night. Janet had put him in the back of the squad car and taken him home, which was completely against regulations, but even then, regulations were fading: like the landscape.

Janet reached the jetty and sat down next to Ivor, bracing her weight through one arm, she landed softly in a lithe motion.

"They would have gone on the island and shot at some livestock. The game would have heard them coming, they're not exactly discreet; idiots wouldn't have got near 'em. Those livestock are the property of Basil and his sister, and Thora. I couldn't see them bullied into losing purpose in this drowned world. We're lucky to have a purpose, they've got Copse, you've got the hub, Tom's got the docks, together you've got the girls and I've got-" a lump caught in Ivor's throat.

"I know, they're lucky you stuck around," Janet said.

They were silent while Ivor sat and smoked, and after a few minutes the Commander dutifully declined a pass.

"If they'd have got what they wanted from Copse, without asking… that's what it was. If they'd just asked, Basil might've invited them to take a few pot-shots at the herd. The deer are a frigging nuisance. But those bastards think they can just take what they want, they think it's everyone for themselves, survival of the fittest: fucking barbarians."

Janet kept her level gaze on Ivor, and Ivor looked away, and then she said, curiously, "Are you sure it was a Beretta?"

The question took Ivor off guard, "I- I'm not sure, I mean, it looked like one. From the films I've watched. Large, for a handgun. Silver barrel, black stock."

"Hmmm…" Janet replied.

Ivor waited, turning his head to her, putting the smoke down for a moment and hugging his knees.

"I heard that in one of the high rises, there's a group of foreign men. You know when the migrants started to flood the beaches in Italy, Spain, the south of France, things got difficult. Europeans started moving further and further north. The French and the Germans couldn't keep law and order, which led to trouble, and even though

we still got satellite reception here, broadcasts, warnings, eventually we had our own hands full. Personally, I think they could still be broadcasting, but I'm sure that down south the news is probably a bit too grim to share, without creating a panic anyway. The diseases wiped enough people out to give what's left of us here a fighting chance. I know it's harsh, but it's true. But anyway, the police in Switzerland were different to us. For a start, they were armed, and I think, like me, they generally have army experience before they join... What was the rifle like?"

"It was fucking loud, Jan. It ripped through the trees like the end of the fucking world, like they were folding in on themselves, being shredded. Expected it to be like an air-rifle or something. Stupid. The bullets cracked through the tree-trunks and felt like they smoked past my skin from twenty yards away. I was shitting myself."

"What was the barrel like? Hollowed out, with like a triangle?" She drew the shape in front of her with a finger in the air, a right-angled triangle, hypotenuse facing down.

"Yeah, exactly like that." Ivor didn't register her curiosity, he went back to his smoke and puffed to make it burn, staring straight ahead, reliving the moments in which he might have stopped living. The ear-splitting, cracking of bullets through the air, and the splintering thuds as they ricocheted off branches or buried themselves in bark.

"It was a SIG then, Swiss." Janet affirmed.

"A SIG?"

"Yeah, manufactured there, police had them, loads of civilians had them too, for hunting in the Alps. But given that the man with the scarred lip, David Patterson - known criminal - probably had a Beretta, I'd guess the mystery man with the ponytail is Swiss military-police of some sort, maybe Italian."

"Swiss army man, great. Would have thought he'd be better at adapting..."

"Hmmm, not funny: maybe there are more of them, army tends to stick together... but there is one good thing that's come from this: I now have clear grounds to raid that tower block. It goes without saying that you should forget who fired first and keep your bow hidden." They sat a few minutes longer in the late afternoon sun. The wind had dropped, and it was dead still.

The sound of a growling engine getting steadily louder brought them both stiffly to their feet. Perspiration gathered under Ivor's top layers and along his brow.

Janet looked at him, sensing his tension, and put a hand on his shoulder. “It’s alright, that’s Tom’s boat.”

The harbour master’s old customs launch was a beast of a boat. It slowed to a stop next to a floating jetty maybe thirty metres from the shore of Mitchell’s Landing. The hull was deep enough put to the sea, so it had to stay out in the channel. It was Navy grey and had ‘Patrol’ daubed over the previous name in yellow paint. Tom kept working, even though the city and its ports had been officially condemned by the far-off government. Most customs resources had to be sent south to curb immigration but Tom had flatly refused to go back to work in any kind of official capacity. He said it was because he could now write his own rota, but it was more down to spite. He’d served his country for nearly two decades, but when his community needed help most, it had been left to drown in the rising waters.

He jumped from the launch onto the floating pontoon, and hurried into the dinghy, slammed the old wooden oars into the gunwales and began to pull firmly and quickly towards the jetty.

“Somebody’s keen to get home,” Ivor observed.

“Something’s wrong…” Janet ran along the jetty and cupped her hands around her mouth. “What is it, Tom?”

In between heavy breaths, the broad-shouldered figure, Jaques-Yves Cousteau red woolly hat and a fisherman’s jacket, vinyl shoulders, hollered back, “The hub… it’s a gunfight, love! Get the guns and vests!”

Janet bolted back to the house.

Ivor threw the end of his smoke into the dark water and started frantically unwinding a line from around one of the poles of the jetty. After some tired, slashing strokes, and two tosses of the rope, Ivor pulled Tom in and he fell onto the jetty, exhausted.

Janet was already sprinting back from the house, waylaid with incomprehensible objects in a washing basket. Ivor was dumbstruck until she skidded to a halt and threw the basket down on the jetty. Two larger guns, one a rifle and the other a sub machine gun, and three handguns, including a revolver that looked like something from the Wild West. There was also a flare gun and boxes of ammunition.

“Fucking hell, Janet! Where’s all that from?” Ivor screeched.

“Tom, put a vest on and take this backpack!” She took the backpack she had over one shoulder and helped it on her still panting husband’s back, then started ramming ammunition inside. Then she threw the bigger guns into the bottom of the old dinghy. “Who’s on?” she asked.

“I thought I saw David through my bin’s before I left, two of our lads were hit, but I couldn’t tell who from the tower.” Tom took a deep breath and hauled himself to his feet.

“Do you have the helmets in the launch?”

“Yes love, come on!” Tom dropped heavily into the dinghy and before his wife followed him, she pushed the revolver and a box of ammunition into Ivor’s midriff, and he winced.

“Keep everyone safe.” Janet was calm, but commanding, as expected.

“Wh-what do you mean? I’ve never even fired a gun before, what am I gunna do with that? We’re miles away from town!” Ivor was not calm; his blood sugars had plummeted after the smoke and his hands were shaking badly.

“You won’t have to use it. My mother knows how,” she said, slowly and calmly.

“Follow us to the pontoon, then tow the dinghy back. Get the girls and my mother in the dinghy and then I want you and your mum to tow them back to Spinney. Can you do that?”

By this point two young girls, one on crutches, were being held back by Freya and Granny Sylvie. The old woman obviously heard the instruction, and in typically pragmatic style took younger girl back into the house, no doubt to take coats and other minor necessities. Erin started crying into Freya’s shoulder; they clung to each other.

Tom pulled away from the jetty, his wife in the stern was pushing large rounds into the barrel of the rifle.

Ivor ran down to the canoe and started to untie it from the jetty pole, fumbling with his shaking hands but managing. By the time he was halfway to the floating pontoon, the launch was speeding away. He bobbed through the wake, towards where the dinghy was slightly adrift of the pontoon and tied the two craft together. He then lent on his paddle and made for the jetty once more.

When he pulled past the jetty, on which the four females now stood, from his canoe he called, “Alright girls: fancy a sleepover? Erin, I think it’ll be easier for you to

get in from the shore. We don't want that nice new cast getting damp, do we? So, I'm going to paddle over there and then you can get in, ok?"

"Good thinking, son." Sylvie replied for her granddaughter, picking up a hold-all by the leather handles and hobbling off. Freya awkwardly helped the broken-ankled girl. Eva picked up a miniature stuffed giraffe and followed.

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It was a long journey back to Spinney. Ivor paddled the dinghy with the two girls. He tried to do so as smoothly as possible, but Erin whimpered in the stern opposite him. Sylvie had taken up his place in the canoe, revolver wedged down the belt of her pinafore, and she helped Freya paddle along at a decent pace behind the dinghy. By the time they got within sight of home it was dusk, but sure enough: Dale was sitting before a small fire a short way from the water's edge. By the time he recognised the sound of oars over paddles the boats were only twenty yards off.

"Who goes there?" he called, sternly, pressing forward with his staff, two-handed before every step, punting himself across the ground.

"It's us, Dad. You shouldn't be lighting fires!" Freya called back.

Ivor couldn't reply. He pulled with gritted teeth, and blistered hands, running the dinghy hard into the muddy shore.

"Have we got visitors?" the old man asked.