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LITERATURA Y NATURALEZA:
VOCES ECOCRÍTICAS EN POESÍA Y PROSA

EDITORES

Bruno Echauri Galván

Julia Ori



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Cli-Fi beyond the American thriller: Cultural and aesthetic alternatives in climate change fiction since 2010

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Abstract

Most cli-fi is written in the genres of thriller, disaster novel and science fiction. However, recent climate change novels are characterised by greater cultural diversity and a wider range of aesthetic strategies and narrative forms. The works presented in this essay, Emmi Itäranta's *Memory of Water*, Franz Friedrich's *On Uusimaa the Tits Have Stopped Singing*, Amitav Ghosh's *Gun Island* and Philippe Squarzoni's *Climate Changed*, use symbols and poetic language, multiple narratives and reference to myths, legends and cultural traditions to promote awareness of nature's agency and attentiveness to the environment. While commentators on cli-fi have tended to focus on the role of action fiction and didactic writing in attracting and informing readers, novels such as those from Finland, Germany, India and France examined here also have a role to play in helping society address environmental challenges.

KEYWORDS: cli-fi, narratives, symbols, myths, attentiveness to nature.

Resumen

La mayor parte de las obras de ficción climática se encuadra en géneros como el *thriller*, la novela de catástrofes y la ciencia ficción. Sin embargo, las novelas recientes sobre el cambio climático se caracterizan por una mayor diversidad cultural y una gama más amplia de estrategias estéticas y formas narrativas. Las obras presentadas en este artículo –*Memory of Water* de Emmi Itäranta, *On Uusimaa the Tits Have Stopped Singing* de Franz Friedrich, *Gun Island* de Amitav Ghosh y *Climate Changed* de Philippe Squarzoni– utilizan símbolos, un lenguaje poético, múltiples líneas narrativas y referencias a mitos, leyendas y tradiciones culturales para concienciar sobre la acción de la naturaleza y el cuidado del medio ambiente. Si bien los estudios previos en ficción climática han venido centrándose en el papel de los relatos de acción y de la escritura didáctica para atraer e informar a los lectores, novelas como las examinadas aquí, de países como Finlandia, Alemania, India o Francia, demuestran que este tipo de narraciones también puede ayudar a la sociedad a abordar los desafíos medioambientales.

PALABRAS CLAVE: ficción climática, narrativas, símbolos, mitos, cuidado de la naturaleza.

1. Introduction: cli-fi as a category dominated by American thrillers and disaster novels

Climate change fiction is a hybrid genre defined primarily by its subject matter: it typically depicts extreme weather events, drought and desertification, flooding and rising sea levels, the mass extinction of species, the spread of tropical diseases, environmental migration, and the collapse of a society divided between rich and poor into lawlessness and armed conflict. Blending factual research, imaginative speculation on the future, and reflection on the human-nature relationship, it is characterised by general authorial commitment to promote awareness of the need for individual and collective action to reduce carbon emissions.

The first novels in which anthropogenic climate change features date from the 1970s (Ursula LeGuin, *The Lathe of Heaven*, 1971; Arthur Herzog, *Heat*, 1977), but climate fiction

only emerged as a new genre in the 1990s, when global warming became a matter of wider public concern, with titles including David Brin's *Earth* (1990), Octavia Butler's *Parable of the Sower* (1993); Bruce Sterling's *Heavy Weather* (1994); Maggie Gee's *The Ice People* (1998), Rock Brynner's *The Doomsday Report* (1998), and Norman Spinrad's *Greenhouse Summer* (1999). A flood of novels followed after the turn of the century. Writing in 2015, Adam Trexler estimated in his book, *Anthropocene Fictions: The Novel in a Time of Climate Change* that there were already over 150 English-language novels addressing the subject. "Cli-fi" has become a profitable marketing label. Concern about the climate finds expression today in high and popular culture, extending across novels, short stories and children's books, feature films, documentaries and TV series, poetry, theatre and art, comics, songs and computer games. However, the novel remains the primary medium of climate fiction.

Many of the best-known works published up to 2010 were thrillers of one kind or another: action thrillers, crime thrillers, conspiracy thrillers, sci-fi thrillers, or techno-thrillers. Herzog's *Heat*, George Turner's *The Sea and Summer* (1987), Brin's *Earth*, Brynner's *Doomsday Report*, Spinrad's *Greenhouse Summer*, Michael Crichton's *State of Fear* (2004), Varda Burstyn's *Water Inc* (2005), Liz Jensen's *The Rapture* (2007), Clive Cussler's *Arctic Drift* (2008) and Matthew Glass's *Ultimatum* (2009) are among the better-known. A large number of disaster and post-disaster narratives have also embraced thriller elements, for instance LeGuin's *Lathe of Heaven*, Margaret Atwood's «Maddaddam» trilogy (2003, 2009, 2013), Maggie Gee's *The Flood* (2004), Kim Stanley Robinson's «Science in the Capital» trilogy (2004, 2005, 2007), Cormac McCarthy's *The Road* (2006), Jeanette Winterson's *The Stone Gods* (2007), James Howard Kunstler's *World Made by Hand* (2008), Steven Amsterdam's *Things We Didn't See Coming* (2009), Paolo Bacigalupi's *The Windup Girl* (2009), and Marcel Theroux's *Far North* (2009). Thrillers and disaster novels continue to dominate climate fiction: titles in these genres since 2010 include Simon Rosser's *Tipping Point* (2011), Nathaniel Rich's *Odds Against Tomorrow* (2013), Simon Ings's *Wolves* (2014), Jeff Vandermeer's *Annihilation* (2014), Bacigalupi's *The Water Knife* (2015), James Bradley's *Clade* (2015), Annie Proulx's *Barskins* (2016), Benjamin Warner's *Thirst* (2016) and Christopher Hepworth's *The Last Oracle* (2017).

Climate change fiction has of course taken other forms. Already at the turn of the century, T.C. Boyle and Maggie Gee extended its scope with complex, nuanced narratives, and major authors have since examined the meaning of climate change for different socio-economic groups and cultures and explored its psychological and emotional impact, in modes of writing ranging from literary realism to satire, horror and fantasy. Jonathan Franzen and Barbara Kingsolver have for instance published realist novels about climate change (*Freedom* and *Flight Behaviour*), and examples of satirical, ironic and humorous cli-fi include Atwood's *Oryx and Crake*, *The Year of the Flood* and *MaddAddam*, McEwan's *Solar* (2010) and Ashley Shelby's *South Pole Station* (2017).

A second generalisation which must be accompanied by acknowledgement that there are exceptions is that the classics of climate change fiction are largely works of North American (more precisely, Anglophone) writers. Butler's *Parable of the Sower*, Boyle's *A Friend of the Earth* (2000), Atwood's «Maddaddam» trilogy, Crichton's *State of Fear* (2004), Robinson's «Science in the Capital» trilogy and *New York 2140* (2017), Bacigalupi's *The Windup Girl* and *The Water Knife*, Kingsolver's *Flight Behaviour* (2012) and Claire Vaye Watkins' *Gold Fame Citrus* (2015) frequently feature among the top ten in novels recommended on the internet and discussed by critics. All of these are American or Canadian. McEwan, David Mitchell, Gee and Winterson are similarly high-profile British cli-fi novelists, and Turner, Alexis Wright and James Bradley well-known Australian contributors to the genre¹.

¹ See for instance the «Prominent examples» and «Other examples» listed in the Wikipedia entry «Climate Fiction»; Heller, «These Cli-Fi Classics Are Cautionary Tales For Today» (2009); Johns-Putra, «The seven most crucial climate change novels» (2019); Armitstead et al., «Five of the best climate-change novels» (2017); also the works discussed in Adam Trexler's seminal study, *Anthropocene Fictions* (2015); and Goodbody and Johns-Putra (eds.), *Cli-Fi. A Companion* (2019).

Climate change is, however, a global problem, and cli-fi is no longer restricted to the Anglophone world. Indeed, its origins were already thoroughly international. Narratives concerned with human effects on climate draw on age-old stories of the effects of climate and weather on humans, going back to the storms of Homeric epic and the deluges of the Old Testament and *Gilgamesh*. Towards the end of the nineteenth century, a number of novelists began to speculate on the consequences of deliberate and unintentional human intervention in the climate. The French father of science fiction, Jules Verne's 1889 novel *Sans dessus dessous* (translated into English as *Topsy-Turvy* and *The Purchase of the North Pole*)² told the story of a geo-engineering project seeking to melt the Arctic and access mineral resources by firing an enormous cannon and removing the tilt of the Earth's axis. The British author H.G. Wells's protagonist in *The Time Machine* (1895) encounters a future Earth of tremendous heat, which, though never accounted for, seems to be the result of its civilisation's "industrial system". A botched geo-engineering project is depicted in the German Alexander Döblin's sprawling sci-fi novel, *Mountains Oceans Giants: An Epic of the 27th Century* (1924). A wave of international climate-related science fiction appeared in the late 1950s and 1960s, which included Kōbō Abe's *Inter Ice Age 4* (1958-9), set in a near-future Japan threatened by melting polar ice caps, dystopian works of the British novelist J. G. Ballard (*The Drowned World*, 1962; *The Burning World*, 1964), and the American Frank Herbert's classic of the genre, *Dune* (1965). The Brazilian author Ignacio Brandão's *And Still the Earth* (1981) and the East German novelist Christa Wolf's *Sommerstück* (Summer Reading, 1989) were written at a time when anthropogenic climate change and its consequences were already known, but they treat global warming and weather change primarily as metaphors, rather than examining their causes or consequences.

Few novels about anthropogenic climate change were written outside North America, Britain and Australia before 2010, but this has since changed. Ilija Trojanow's *The Lamentations of Zeno* (2011) is possibly the most significant of around forty German, Austrian and Swiss cli-fi novels³. Maja Lunde's *History of Bees* (2015) and Antti Tuomainen's *The Healer* (2010) are among a series of Nordic novels by authors including Brit Bildøen, Jostein Gaarder, Elina Hirvonen, Emmi Itäranta, and Johanna Sinisalo, all of which have been translated. Although few French cli-fi novels are currently available in English (Michel Houellebecq's *The Possibility of an Island* [2005], Antoine Bello's *The Falsifiers* [2007] and Philippe Squarizoni's *Climate Changed: A Personal Journey Through the Science* [2014] being exceptions), French authors of climate fiction include Julien Blanc-Gras, Jean-Marc Ligny (who has written four climate change novels), Yann Quero, Jean-Christophe Rufin and Philippe Vasset. Rosa Montero and Javier Sierra have written Spanish novels in which climate change plays a role. Works in the genre from South America, China and the Indian subcontinent include the Argentinian writer, Rafael Pinedo's *Plop* (2002), Cixin Liu's *The Three-Body Problem* (2008) and Rajat Chaudhuri's *The Butterfly Effect* (2018).

Unsurprisingly, many foreign-language novels about climate change have adopted the Anglo-American model of the thriller: in Germany Dirk Fleck's *GO! Die Ökodiktatur* (GO! The Eco-Dictatorship, 1993) and *Das Tahiti Projekt* (The Tahiti Project, 2008), Frank Schätzing's *The Swarm* (2004), Ulrich Hefner's *Die dritte Ebene* (The Third Level, 2009), Helmut Vorn-dran's *Blutf Feuer* (Blood Fire, 2010), and Sven Böttcher's *Prophezeiung* (Prophecy, 2011); in France Bello's *The Falsifiers* and Ligny's *Aqua™* (2006); in Spain and Latin America Montero's *Weight of the Heart* (2015) and Sierra's *The Lost Angel* (2011), Pinedo's *Plop* and Rita Indiana's *Tentacle* (2015); in the Nordic countries Tuomainen's *The Healer*, Hirvonen's *When*

² In the following, the titles of books written in foreign languages are given in English where there is a published translation. Titles which have not been translated are given in the original language, with a translation of my own in brackets.

³ See Goodbody 2017. Since this overview was written, a further dozen German cli-fi novels have been published.

Time Runs Out (2017) and Lunde's as yet incomplete "Climate Quartet". However, literary production in languages other than English has also adopted a variety of different writing strategies and aesthetic approaches.

In the following, I examine the use of poetic language, symbols, myths, settings and cultural traditions in four works which seek to promote awareness of nature's beauty, power and importance for humanity: Emmi Itäranta's *Memory of Water*, Franz Friedrich's *Die Meisen auf Uusimaa singen nicht mehr* (On Uusimaa the Tits Have Stopped Singing), Amitav Ghosh's *Gun Island*, and Philippe Squarzoni's *Climate Changed*. I argue that while commentators on cli-fi have tended to focus on action narratives and didactic writing, and the role they play in informing readers about climate change and motivating them to take action, such writing from Finland, Germany, India and France also has a role to play in addressing the challenges of climate change. Evoking alternative ways of relating to the natural environment in complex narrative forms and recalling cultural traditions supporting them, it prompts readers to reflect on the ethical implications of global warming.

2. *Emmi Itäranta, Memory of Water*

In *Memory of Water* (2014), the action is set in a dystopian future: a global climate disaster has been accompanied by wars over the remaining reserves of water and oil which have rendered large parts of the Earth uninhabitable. Many of the technological achievements of the past have been lost. Water has become a precious commodity which the military government controls access to and uses to terrorise the population. However, this is no typical post-apocalyptic novel. Nor is it a thriller, although tension builds throughout as strategic information is gradually revealed. There are ominous hints from the start that all will end disastrously, and death is omnipresent, personified, as in Ingmar Bergman's film, *The Seventh Seal*, by a shadowy waiting figure which appears at intervals. However, fear is countered by the calm, almost meditative stance of the first person narrator, Noria Kaitio. Day by day Noria goes about her business, watching helplessly as the military imprison and execute desperate villagers who have stolen water. Water shortage and water wars are familiar themes in cli-fi: examples include Ligny's *Aqua™*, Houellebecq's *The Impossibility of an Island*, Saci Lloyd's *Carbon Diaries 2015*, Warner's *Thirst*, Bacigalupi's *Water Knife*, Lunde's *The End of the Ocean*, and Burslyn's *Water, Inc.* But this sci-fi teen novel is distinguished from such novels on the one hand by its sensuous evocation of the sight, sounds, smell and taste of water, and on the other by its use of the element as a multidimensional symbol, linking climate change with an exploration of personal development and issues of gender and sexuality, and beyond these with reflection on the meaning of life and the ability of art and writing to provide a permanence which human life does not afford.

Memory of Water is the story of Noria's coming of age, her dawning understanding of the "strange laws and threatened balances of secret alliances and bribery" her parents had lived by, of the "whole dark grown-up world stretching like a lightless world in all directions" around her (137). Aged 17, she has to decide between upholding family tradition by succeeding her father as the village's tea master, and a more secure, and probably more exciting, life with her mother in a distant city. She must choose between an existence akin to priesthood and a modern life of science. Although she opts for the former, she ultimately forges her own destiny. Revealing to her friend Sanja the secret of the hidden spring whose guardian she has become since succeeding her father as Tea Master, and sharing the water with the villagers, she disobeys her father, in the name of friendship, and of solidarity with her fellow villagers. The world Noria is growing up in is one in which most people seek to enjoy this life while it lasts, believing there is no afterlife in which they will be rewarded for good deeds. It is also one in which people avert their gaze from things that are happening, and try to live on as if they had not seen them (209). Noria sets readers an example in choosing to do the right thing, in the

hope that it will one day make a difference. Inevitably, she is betrayed: the military are told about the spring by an informer, and when Noria refuses to collaborate as a spy, she is confined to her home and starves to death.

However, the book ends with hope: Noria writes down her story, and hides it for posterity. Her account includes a report by dissident scientists from an earlier time of their discovery that the supposedly uninhabitable “lost lands” of western Scandinavia in reality contain vast reserves of fresh water. Knowledge of this water has been suppressed by the military, who use censorship, limitation of communication and restriction of movement as ways of controlling the population alongside water rationing. In a short Epilogue, we are told that Sanja manages to escape and pass on the original scientific report to Noria’s mother, who is a member of an underground organisation working to overthrow the military. This political background is, however, only sketched out: the focus is on Noria’s situation, and her emotional responses to it. Untypically for young adult novels, there is little action in *Memory of Water*, the pace is slow, and there is no love story. (Lesbian sexuality is hinted at, but so subtly as to escape most readers.) Noria is no superhero, but a thoughtful, introverted young girl struggling with the recognition of social injustice and her personal responsibilities.

Many cli-fi novels locate parts of the action in real world settings which are described in detail, to bring home to readers the likely impact of climate change and make it real. (Robinson’s *Sixty Days and Counting* [2007], for instance, features a precise topography of parts of Washington city.) In *Memory of Water*, Noria’s village is in the “Scandinavian Union”, a land of white nights, where the sun does not set in midsummer, and there are “fishfires” in the sky in winter reminiscent of the Aurora Borealis. It is a land with Finnish-sounding placenames, where lingonberries grow, and children play mountain trolls. But Itäranta estranges and universalises it by introducing elements from other places and times. Apart from the tea ceremony, which comes from China and Japan, there are references to people playing the Chinese game of Mahjong, and to a Chinese-sounding annual “Moonfeast” with a dragon parade. The keening of the quasi-professional “lament-women” at Noria’s father’s funeral, which consists of archaic incantations in a long lost language, reinforces the sense of timelessness evoked by the dreamlike narration.

In this parched world of dried swamps, dead forests, burned-out grass and bare stone, the villagers eke out a miserable existence, and their animals move in the dust of the fields in search of water, surrounded by swarms of horseflies and midges, like in sub-Saharan Africa. Itäranta’s message is clear: water will become an increasingly precious natural resource as the world warms, and we take it for granted at our peril. However, water also possesses a wider symbolic value. There are no man-made chains which will hold the water and the sky, we are told (259). Water exists “beyond all beginnings and ends” (221). It exemplifies nature’s autonomy and agency. “Water doesn’t belong to us, we belong to water” (221). Water is also associated with memory. Back in the “Twilight Century” which separated the present from the “past-world era”, the spring whose secret is guarded by the tea masters served as a hiding place for members of the expedition to the lost lands before they were captured by the military, and they hid the discs with their forbidden knowledge at the bottom of the underground pool. Water is associated with the memory, in a time of oppression and deprivation, of past freedom and well-being. It becomes a physical trace of all that has been lost. “Now only the water remembers” the time before winters disappeared and the water wars began, Noria’s father comments (13).

With its ritual savouring of the taste of water, the tea ceremony stands for a relationship of respect with nature. It exemplifies cultural traditions fostering a caring relationship with the environment. Tea masters learn to move with a gracefulness which derives from total attunement to the dynamics of an ever-changing nature. Preparing the tea involves a smoothness of movement “like a tree bending in wind or a strand of hair floating in water” (31). At the same time, taking tea is linked with the subordination of individuals to the community,

and with social equality, for the low door of the teahouse compels those entering to kneel, regardless of rank.

Repeating and modulating rhythmic phrases and sentences, the language of Itäranta's novel is poetic, and rich in similes and metaphors. She evokes the beauty of small things, writing for instance of waterskins hung up to dry: "Sunlight filtered in veils through their translucent surfaces. Slow drops streaked their insides before eventually falling on the grass" (6). Natural objects are repeatedly anthropomorphised: "Water walks with the moon and embraces the earth, and it isn't afraid to die in fire or live in air. When you step into it, it will be as close as your own skin, but if you hit it too hard, it will shatter you" (5). "The sun had crawled to the sky, already languid with autumn, but still hot" (90). Such echoes of animism endow nature with beauty and power, and undermine human exceptionalism.

Noria tries to understand why people in the past-world behaved as they did, recklessly consuming resources, ignoring climate change, throwing things away rather than recycling and leaving behind vast quantities of waste, without considering the consequences for the generations to follow. "I have tried not to think about them, but their past-world bleeds into our present-world, into its sky, into its dust. Did the present-world, the world that is, ever bleed into theirs, the world that was?", she muses (26). In her mind's eye she sees a figure from the past, a woman or perhaps a man, standing on the bank of a river and imagining it drying up: "I would like to think she turns around and goes home and does one thing differently that day because of what she has imagined, and again the day after, and the day after that" (26). The passage sums up the author's aims with this poetic cautionary tale: to trigger imagination of the climate-changed future, and thereby perhaps facilitate behavioural change in society.

3. *Franz Friedrich, On Uusimaa the tits have stopped singing*

A German novel set in Finland which also works with symbols, legends and dreams, Franz Friedrich's *Die Meisen auf Uusimaa singen nicht mehr* (published in the original German in 2014, as yet untranslated), makes for interesting comparison with *Memory of Water*. However, detailed descriptions of landscape, plants and birds also play an important part in the author's writing strategy.

Climate science plays no part in Friedrich's novel: global warming only features in one of the three narrative strands which are interwoven in the book. It opens with the story of a nature documentary film maker, who leaves his home in Brussels on a trip to the Finnish island of Uusimaa. His journey is triggered by fascination with a documentary made there twenty years earlier by a film maker called Susanne Sandler, investigating why a species of bird on the island (the Siberian Tit, known in the USA as the Grey-headed Chickadee) has stopped singing. This first narrative is interrupted by a series of entries from the diary which Susanne kept during her stay on Uusimaa in the 1990s. We learn that the island had been evacuated because of toxic pollution: the only people permitted to remain are a team of naturalists in an ornithological research station. A third narrative is set in Berlin, which is experiencing the hottest temperatures in living memory (203). In the last ten pages of the book the three narratives converge. After two decades of silence, the tits on Uusimaa have started singing again. The film maker from Brussels arrives and finds himself joined by crowds of people who used to live on the island: they have been given permission to return.

The mysterious environmental contamination on Uusimaa is never explained and it does not appear to have anything directly to do with climate change. Unlike *Memory of Water*, *Die Meisen auf Uusimaa singen nicht mehr* does not imagine life in a climate-changed future. Instead, it explores experiences of intimacy with nature and of its loss in the near future, in poetic images. The principal action is set in the pristine environment of the abandoned island, where even in the past people had lived in harmonious unity with the animals and plants of the region. "Uusimaa" is a mythical place rather than a real one: *uusimaa* means "new land" in

Finnish. The island has become a “forbidden zone” (19), a phrase echoing Andrei Tarkovsky’s film *Stalker*. Descriptions of the deserted settlements recall Chernobyl, and the idea of a Finnish island evacuated because of contamination may have been inspired by Onkalo, the deep repository for spent nuclear fuel which the Finnish government has built. An imaginary place associated with Norse mythology (the Eddas) and the ancient Finnish past (the Kalevala), Uusimaa stands for a lost utopia and the dream of regaining it.

Few cli-fi novels depict plausibly effective forms of collective action (Robinson’s *Forty Signs of Rain* [2004], Matthew Glass’s *Ultimatum* [2009] and Fleck’s *Das Tahiti Projekt* [2008] are exceptions to the rule), and *Die Meisen auf Uusimaa singen nicht mehr* no more attempts to do so than *Memory of Water*. However, it indirectly references a historical social experiment, when a group of Finns who had emigrated to Canada in the late nineteenth century founded a model community called Sointula (“Place of Harmony”) on an isolated island off Vancouver Island. It was also in part inspired by the situation of the Åland Islands, a Swedish-speaking region of Finland which enjoys considerable autonomy (see Porombka 2014).

The song of the native birds, and its absence, which echoes Rachel Carson’s *Silent Spring* (1962), is a central symbol. It links the different places and times in the novel, and serves as a reminder of the imbrication of human agency in the greater whole of nature. Susanne Sandler’s diary describes a strangely moving performance of an ancient folksong sung by a choir at the ornithological station. Their singing is ecstatic and trance-like. We encounter the same song later in a performance by a Finnish choir in Berlin. It is described as a human vocalisation of the singing of birdsong, as continuing a music which began tens of thousands of years ago, and as uniting the living with the dead and the whole of creation. It is presented as the song of the earth, a magical incantation capable of healing the wounds inflicted on the planet, by evoking a utopian future. Keeping alive the dream of freedom, fulfilment and hope, the song of the birds and the Finnish folksong evoke, like Noria’s written record of her life in *Memory of Water*, the ability of art to unite humanity and bring about a reconciliation with nature.

Adam Trexler (2015: 9) has described cli-fi as a medium to “implore and lament” climate change as well as explaining and predicting it. Friedrich’s novel only addresses the issue of climate change indirectly, but it laments it, by drawing attention to things which are in danger of disappearing as a result of global warming, and by recalling ancient Norse and Finnish poetry which gives voice to the non-human and exemplifies a relationship of intimacy with nature. Its experimental form, alternating and only loosely interweaving separate narrative strands, and embedding sci-fi elements alongside passages of realist nature writing in the framework of a fairy-tale, makes greater demands on readers than *Memory of Water*. However, like Itäranta’s novel, its pre-emptive mourning for the losses incurred by our destruction of the environment, its decentring of humans as sole agents, its slow pace and dreamlike tone, and its suggestion of ultimate recuperation present a moving alternative to the thriller and disaster novel.

4. Amitav Ghosh, Gun Island

In 2016, Amitav Ghosh, who lives in New York but was born in Bangladesh, published *The Great Derangement*, an extended essay examining our collective denial in the face of climate change. Why, he asked, did the looming environmental catastrophe appear to be resisting adequate representation in novels, and how might climate change be written about? His answer, *Gun Island* (Ghosh 2019), is, like Itäranta’s and Friedrich’s novels, neither thriller nor disaster narrative. Instead, it makes extensive use of history and legend, interweaving these with the action in the present and hinting at parallels. Like *Memory of Water* and *Die Meisen auf Uusimaa singen nicht mehr*, *Gun Island* draws on traditional cultural narratives to give voice to the nonhuman, and ends with a message of hope. However, it differs from them in its geographical location of climate change, and in the realism of its depiction of its consequences, especially climate-driven migration.

The novel is structured like a detective story, piecing together clues to understand the true meaning of a popular Bengali legend, «The Gun Merchant». This tells of a merchant who was fated to travel the world seeking a safe haven from the goddess of snakes, Manasa Devi. It turns out to date from the seventeenth century, and to have originally been a true story, which became embellished with elements from tales of heroism and the supernatural, and mythical elements from Hindu and Muslim cosmology. The core of the story is an account of the life of a Jewish Indian merchant who was forced to leave his home in Calcutta by circumstances resulting from environmental changes brought on by the Little Ice Age. He became wealthy trading in Venice, but nearly lost everything in his struggle against powerful enemies. In the legend, his adversaries are depicted as the forces of an avenging nature. Loose parallels emerge between this tale of Bonduki Sadagar (it emerges that the merchant's name has been mistakenly linked with *bundook*, the Bengali word for “gun”: it derives from the Arabic name for the city of Venice, so the story is in reality that of the «Merchant Who Went to Venice») and the experiences of the narrator, Deen, on the one hand, and twenty-first century migrants seeking to enter Europe from the Indian subcontinent and Asia on the other.

A key focus in the novel is the role of pollution and global warming in driving animals to change their patterns of movement, and humans to migrate. The action takes place mainly in three locations, all of which are threatened by climate change: the Sundarban mangrove swamps on the border between India and Bangladesh (the setting of Ghosh's earlier novel, *The Hungry Tide*, 2004), where humans and animals are suffering from the rising sea level and pollution from fertilizers and an oil refinery; Venice, which is experiencing increasingly frequent flooding and sinking into the Adriatic as the wooden piles on which it is built rot and are eaten away by shipworms; and California, parts of which are being devastated by drought-induced wildfires.

To start with, the scholarly Deen is as oblivious to these environmental problems as he is to the geopolitical relations which exacerbate them. He struggles with depression, but gradually overcomes it while learning about the impact of climate change and Bangladeshi and Indian emigration to Europe. At the same time, Deen delves into the origins and meaning of the Gun Merchant tale. With the help of friends, he comes to understand that the Gun Merchant is not the victim of the snake goddess Manasa Devi: his misfortunes are due to his arrogant belief that he is rich and clever enough not to need to respect the forces she represents. Manasa personifies a nature whose power has been overlooked, and the legend encapsulates awareness of human self-endangerment by failing to practise restraint in relation to the other living beings with whom we are co-dependent. The novel is thus in part an ecological Bildungsroman, with Deen, the proponent of Enlightenment rationalism, learning to acknowledge the importance of intuition and the limits on human agency imposed by the natural world.

Gun Island conveys a good deal of scientific and political information – mainly on marine biology and the flooding and decay of Venice, and forest fires in the Los Angeles region, but also on the reasons why Asian and African migrants come to Europe, the journeys they make, and the deprivation and exploitation they suffer *en route*. Ghosh explains the historical background to today's population movements and the climate vulnerability driving them. His principal messages are that we are not the first generations to experience existential threat from a change in the climate, that humans are probably resourceful enough to deal with it (at the end of the book, humanitarian justice prevails over xenophobic anxiety and exploitative greed), and that more of the stories in our cultural heritage than we realise are concerned with climate changes and their human impact, and they convey valuable knowledge if we are open to their symbolic language.

The story of the Gun Merchant is an allegory of the tendency of the pursuit of material profit in global capitalist trade to overlook the necessity for restraint in respect of fellow humans and the nonhuman world. In *Gun Island*, Ghosh illustrates the power of stories to en-

gage readers and change the way they see the world through symbolic representation. He also makes the point explicitly: “Only through stories can invisible or inarticulate or silent beings speak to us”, Deen is told by a friend, “it is they who allow the past to reach out to us. [...] It is only through stories that the universe can speak to us, and if we don’t learn to listen, you may be sure that we will be punished for it” (141). Philippe Squarzoni’s *Climate Changed* is a work of nonfiction, but it also makes use of story and symbols to convey its message, conveying them through graphic images as well as text.

5. *Philippe Squarzoni, Climate Changed*

Squarzoni’s 450-page *bande dessinée*, *Climate Changed: A Personal Journey Through the Science* (French original 2012, American translation 2014), interweaves meticulously researched scientific, economic and political facts with an engaging personal story and philosophical reflections, conveying its message through striking symbolic images and moving landscapes. The book, which Squarzoni took six years to write and draw, was marketed as a “graphic novel”, a format which gained credibility in America and Britain in the 1990s, when Art Spiegelman’s *Maus* (which relayed his father’s experiences during the Holocaust through pictures in which Jews were mice, Germans were cats and Poles were pigs) was awarded the Pulitzer Prize. The graphic novel is now widely recognised by educators as an effective tool for communicating serious issues to adults as well as children, through its combination of text and images. *Climate Changed* is not a novel, but it uses autobiographical narrative as a framework for conveying information about climate change and its challenge to individuals and society. Squarzoni interweaves testimony from leading scientists, economists, and journalists with a multitude of visual motifs that indict contemporary consumer culture, and meditations on storytelling, in a compelling call to readers to stop, think, make changes in their everyday lives, and work for political change.

Detailed scientific information is conveyed through passages from his reading and statements from interviews with experts, going far beyond the topics one might expect (the growth of energy consumption, greenhouse gases, extreme weather events, feedback loops and tipping points, species loss), to include natural climate variation, carbon trading, agriculture, deforestation, climate migration, the spread of infectious diseases, energy poverty in the developing countries, and ways of mitigating global warming. The changing environment is illustrated with graphs, tables and statistics. While Squarzoni acknowledges that it is too late to prevent significant climate change from happening, he argues forcefully that we can still limit it. Where do we start with the unavoidable cuts? How can we strike the right balance between unacceptable authoritarianism and appeals to voluntary restraint which are condemned to be ineffectual? Squarzoni leaves the answers open, admitting ambiguities and tensions as he observes contradictions and limits.

The book is, however, as personal and poetic as it is didactic. In this respect, it contrasts with other graphic novels on climate change such as the German work, *Die große Transformation: Klima – Kriegen wir die Kurve?* (The Great Transformation: Climate – Will We Manage to Get Round the Bend?, 2012, by Alexandra Hamann *et al.*). Facts are embedded in a chronicle of the author’s personal life as he learns about climate change and grapples with individual accountability in the Anthropocene. Scenes from everyday life with his partner in Paris are depicted, idyllic childhood memories growing up in a village in the Ardèche region of South-East France, and hiking holidays. The exposition of climate science and climate politics is punctuated with moments of difficult personal decision. Squarzoni tells how he declined an all-expenses-paid invitation to attend an event in the Far East because of the carbon emissions from the flights. But he felt so frustrated by the insignificance of his personal sacrifice when others were not changing their behaviour that he went on holiday to America two years later, visiting New York and hiking in the Glacier National Park. *Climate Changed*

approaches the issue from the perspective of someone who cares, who is afraid and angry, but who, like the rest of us, can't care and be afraid and angry every minute of his life. The book is pervaded by a powerful sense of loss, with the losses resulting from climate change being placed in the wider context of the changes wrought by modernisation, and the universal loss of childhood innocence and security. Squarzoni meditates on the beginnings and endings of films and books, hinting that we must learn to accept that the environment is changing and take responsibility for its course, that the future is open, and it is in our hands how climate change will work out.

Like *Memory of Water*, *Die Meisen auf Uusimaa singen nicht mehr* and *Gun Island*, *Climate Changed* reminds us that climate change is experienced, studied and recognised as a political issue outside of America and Britain. Not only are the urban scenes and regional landscapes he depicts French, but also the climate scientists, energy experts, economists, journalists and environmental campaigners who he interviews. (There last are leading figures in Attac, the anti-globalisation movement «Association for the Taxation of financial Transactions and Aid to Citizens» founded in France in 1998.) Extreme weather events are illustrated by the heatwave in 2003 which led to the death of 15 000 mainly elderly people in France, as well as Hurricane Katrina in New Orleans, and Léon Bourgeois's philosophy of Solidarism is cited as a source of inspiration for social organisation in the Anthropocene. Squarzoni's reflections on writing are also contextualised through an eclectic range of references to French literature (Flaubert's historical novel *Salammbô*, Rimbaud's *Saison en Enfer*, Céline's dark *Voyage au Bout de la Nuit*) and world culture (Hollywood and Japanese cinema, J.M. Barrie's *Peter Pan*, T.E. Lawrence's *Pillars of Wisdom*, and Richard Brautigan's 1960s post-apocalyptic novel of commune life, *In Watermelon Sugar*).

Striking visual images help convey his critique of capitalist consumption and the dilemmas confronting individuals in the West, for instance the robot symbolising the giant of technology-led overconsumption (Squarzoni 2014: 373), and the frame (in a section on biofuels) of a man filling the tank of his car with a hose coming from a starving woman and child instead of a petrol pump (329). Hedonistic consumption is evoked by classic advertisements for Coca-Cola and 1950s gas-guzzling cars. The eye and the plate of food being pushed over the edge of the table are recurring images for looking into climate change, and the exceeding of planetary limits. Bridges illustrate transitions in our individual and collective lives, paths we may take for better or for worse. The "brown season" (mentioned p. 380, but also referenced in the title of the French original), when the winter snow has begun to melt but spring has not yet arrived, stands for a time of change that will test our values, of uncertainty about the future and indecision over climate action. Contrasting with such frames are majestic landscapes in the Alps and Montana: these add a poetic dimension, reminding readers of the beauty and grandeur of nature.

Irony is a further weapon in Squarzoni's armoury. In several places (e.g. 360) he surprises the reader by substituting an almost trivial personal worry for the environmental apocalypse he has led us to expect. Everyday activities are juxtaposed with planetary problems, and he ends the book in a teasingly playful manner, citing Woody Allen: "I wish I could think of a positive point to leave you with. Will you take two negative points?" To which his partner responds: "Are you going to end your book like that?" (466). The final images show them both continuing to study.

Although it is a work of nonfiction conveying a wealth of scientific information and a strong left-wing political message, *Climate Changed* thus shares many of Itäranta's, Friedrich's and Ghosh's aims and literary techniques. Graphic novels are often rated for their advantage over novels in being able to present challenging information visually in small, readily understandable portions. However, Squarzoni's book shows that they can serve as a medium not only for informing readers, but also for connecting them emotionally with global warming.

6. Conclusion

Climate fiction has in the past tended to fall back on dated and formulaic clichés in narratives with one-dimensional characters, wooden dialogue, stock motifs and far-fetched plots involving black-and-white confrontations between heroes and villains. Particularly in thrillers and disaster novels, the exploration of how individuals behave in the face of dilemmas and how personal relationships unfold in the context of ecological crisis has often been shallow and haphazard.

However, there are alternatives to such generic conventions. In the Conclusion of *Anthropocene Fictions* (“The Real and the Future”, 223-237), Adam Trexler (2015) has argued that novels by Jonathan Franzen, Barbara Kingsolver and Robert Edric published between 2010 and 2012 (*Freedom, Flight Behaviour, Salvage*) are evidence of the emergence of a body of realist fiction about climate change, suggesting that, in the hands of these authors at least, realist fiction can bring home to readers the reality of climate change. In part, Trexler was responding to Ursula Heise’s presentation of non-realist narrative structures as perhaps the best, and certainly the most interesting ways of representing climate change in the brief concluding chapter (entitled «Some Like It Hot: Climate Change and Eco-Cosmopolitanism», 205-210) of her landmark 2008 study, *Sense of Place, Sense of Planet*. Displacing the dominant apocalyptic narrative by framing or satirising it, adopting the fragmented, multivocal narrative structure of the high modernist urban novel, and frustrating readers’ expectations of unity and coherence of plot and character can all serve as formal correlatives to the limitations of human control over the natural environment, Heise had argued. Nicole Seymour (2018) has since advocated writing that identifies and responds to the complexities and ambivalences of climate debates and climate politics through irony, ambivalence, and irreverence (4). Such works reject the earnest didacticism and sanctimonious self-righteousness which she sees as characterising mainstream environmental discourse, and perform a crucial function by modelling flexibility and creativity in the face of crisis. T.C. Boyle, Will Self, Christian Kracht, Ian McEwan and Philippe Vasset are among the authors of climate change novels who have worked with satire, humour and irony, incorporating the elements of playfulness and provisionality which environmental educators and science communicators recognize as central to public engagement.

In this essay I have chosen to focus on a different approach to cli-fi. The works I have presented demonstrate some of the characteristics recommended by Heise (2008) and Seymour (2018), but their principal features are slowness of pace, reflection, hopeful endings, a diversity of settings, evocative poetic language, symbols, and in the case of Squarzoni, graphic images. Multiple narratives and symbols are used to attract, intrigue and challenge readers, and to foster awareness of our co-dependence on the natural world. Itäranta, Friedrich, Ghosh and Squarzoni address the moral choices we are confronted with, tapping into ancient traditions recalling the value of what is endangered by climate change, and inspiring hope that current forms and levels of consumption in the developed world may be changed in time to prevent the worst. The climate emergency demands we think about our responsibilities on a global rather than a national scale, and about our effects not just on fellow humans but on all the species that call this planet home. Literature provides a space in which to think through such difficult questions. However, if cli-fi has a role to play in enabling us to do the psychological work necessary to deal with climate change, no one type of novel can do this on its own. A range of aims and strategies is needed to meet the challenge, including novels locating climate change in different countries, drawing on their cultural resources, and addressing the mindsets of their respective readerships.

Bibliography

- ARMITSTEAD, C. / CAIN, S. / J. JORDAN, «Five of the best climate-change novels», *The Guardian* (19-I-2017). Available at: <https://www.theguardian.com/books/booksblog/2017/jan/19/five-of-the-best-climate-change-novels-cormac-mccarthy-margaret-atwood> [Last accessed 15-XI-2020].
- FRIEDRICH, F., *Die Meisen von Uusimaa singen nicht mehr*. Frankfurt am Main: S. Fischer 2014.
- GHOSH, A., *Gun Island*. London: John Murray 2019.
- GOODBODY, A., «Telling the Story of Climate Change: The German Novel in the Anthropocene», in: Schaumann, C. / H. I. Sullivan (eds.): *German Ecocriticism in the Anthropocene*. New York: Palgrave Macmillan 2017, 293-314.
- GOODBODY, A. / A. JOHNS-PUTRA (eds.), *Cli-Fi: A Companion*. Oxford: Peter Lang 2019.
- HEISE, U., *Sense of Place and Sense of Planet. The Environmental Imagination of the Global*. Oxford: Oxford University Press 2008.
- HELLER, J. «These Cli-Fi Classics Are Cautionary Tales For Today», *NPR* (26-VII-2019). Available at: <https://www.npr.org/2019/07/26/745379270/these-cli-fi-classics-are-cautionary-tales-for-today> [Last accessed 15-XI-2020].
- ITÄRANTA, E., *Memory of Water*. London: HarperVoyager 2014.
- JOHNS-PUTRA, A., «The Seven Most Crucial Climate Change Novels», *Quartz* (18-XII-2019). Available at: <https://qz.com/1770404/the-seven-most-crucial-climate-change-novels/> [Last accessed 15-XI-2020].
- POROMBKA, W., «Franz Friedrich: Ein poetischer Ornithologe», *Deutschlandfunk* (15-X-2014). Available at: https://www.deutschlandfunk.de/franz-friedrich-ein-poetischer-ornithologe.700.de.html?dram:article_id=300385 [Last accessed 15-XI-2020].
- SEYMOUR, N., *Bad Environmentalism. Irony and Irreverence in the Ecological Age*. Minneapolis: University of Minnesota Press 2018.
- SQUARZONI, P., *Climate Changed. A Personal Journey Through the Science*. New York: Abrams ComicArts 2014.
- TREXLER, A., *Anthropocene Fictions: The Novel in a Time of Climate Change*. Charlottesville and London: University of Virginia Press 2015.
- WIKIPEDIA. «Climate Fiction». N.d. Available at: https://en.wikipedia.org/wiki/Climate_fiction [Last accessed 15-XI-2020].