Recalling the Past to Imagine the Future:
History and Memory in Climate Fiction

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Abstract

I was a founding member of the POLIS 'Memory, History, Identity' Research Group (now 'The Politics of Culture and Memory') in 2007, but the main focus of my personal research since the 1990s has been Ecocriticism. In 2011 I attempted to think together Memory Studies and Ecocriticism by exploring the common ground which is present in the roles played by *place* in both identity construction and the promotion of environmental awareness. In this talk I take a different approach, focusing on the paradoxical presence of history and memory in climate change fiction, a twenty-first-century genre whose primary aim is to imagine a climate-changed future (rather than the past). Drawing on Stef Craps' account of 'anticipatory memory' in climate change writing and film (2017), I examine the presence of memory in Max Frisch's *Man in the Holocene* (1979) and Emmi Itäranta's *Memory of Water* (2012). I argue that history and memory are deployed here to encourage readers to face up to climate change, as in the film, novel and popular science book discussed by Craps, but that Frisch and Itäranta go beyond framing our possible future as a past recalled by a historian or archivist looking back from a distant future: they ascribe mnemonic agency to landscapes and water, and link human memory with a planetary 'memory' which is a metaphorical extension of the geological record of climate change on which the concept of the Anthropocene is based.

This talk is in five parts. I begin by saying what climate fiction is and what it aims to do. Secondly, I explain Stef Craps's concept of 'anticipatory memory'. Then I explore the presence and function of memory in 2 novels: Max Frisch's *Man in the Holocene* (German original 1979, translated 1980) and Emmi Itäranta's *Memory of Water* (Finnish original 2012, English translation 2014). I finish by drawing some tentative conclusions about how recalling the past can help to imagine the future.

1. <u>What is climate fiction, and what do cli-fi authors seek to do?</u>

Literary writing about climate change started already in the 1970s, but it really took off twenty years ago. In 2013 'Cli-Fi' (a term coined in analogy with sci-fi) was hailed in the media as a new genre. It has become a category for marketing popular fiction, and there are now hundreds of cli-fi novels, with new ones being published every year. Academic and general interest in the subject has been growing, with workshops and conferences, articles and books, online reviews and blogs, and even a Climate Fiction Festival in Berlin last December.

The Canadian Margaret Atwood and the American Kim Stanley Robinson are among the best known authors of this climate change fiction. Post-apocalyptic scenarios predominate: apart from Atwood's books, Cormac McCarthy's *The Road* (2006) and Paolo Bacigalupi's *The Windup Girl* (2009) are among the best known. But there are also more realistic books, some of which offer constructive proposals to combat climate change: for instance, Kim Stanley Robinson's 'Science in the Capitol' trilogy (2004-7).

British authors of cli-fi include Maggie Gee, Saci Lloyd, Ian McEwan, David Mitchell and Jeanette Winterson. Titles have been published in countries from Germany and Scandinavia to France and Spain, and by African, Indian and Chinese

authors. There are of course also climate change films, plays, graphic novels and computer games.

Some cli-fi is no more than popular light fiction, fantasising about the future, indulging readers' guilty pleasure in scenarios of natural disasters leading to the collapse of a society divided between rich and poor into lawlessness and armed conflict. Climate change serves as a backdrop for thriller plots, conspiracy narratives, and crime stories.

However, other titles are a new kind of literature of political commitment: the authors see themselves as playing a role in raising public awareness of the need for climate action. Cli-fi is characterized by a mix of factual research and speculative imagination. Many novels and films include factual explanations offered by scientists. In *Flight Behaviour* for instance, Barbara Kingsolver draws on her specialist knowledge as a trained biologist and ecologist to rehearse the different ways in which global warming might affect the migration routes of the monarch butterfly. *Flight Behaviour* is also one of a group of novels which tackle the subject of climate scepticism, seeking to understand the social, political and cultural reasons for it. Ian McEwan's *Solar* is another.

On the whole, the strengths of climate fiction are less in conveying facts or providing solutions to problems than in motivating and mobilising readers. Its contribution to climate discourse lies in enhancing public awareness of climate change by bringing home its consequences in fictional scenarios, and making possible futures real through vivid and memorable portrayal of attitudes and people. It conducts thought experiments, exploring conflicts of interest and tracing the inner development of characters. Stories about climate change foster a sense of care by engaging our emotions, and they raise questions about fairness and responsibility.

2. 'Anticipatory memory' in climate fiction

In his article 'Climate Change and the Art of Anticipatory Memory', Stef Craps identifies, describes and considers the reasons for a narrative device which turns out to be surprisingly common in films, novels, and popular science books on climate change. Franny Armstrong's film, *The Age of Stupid*, Naomi Oreskes and Erik Conway's fictional future history, *The Collapse of Western Civilisation: A View from the Future*, and Jan Zalasiewicz's non-fiction book *The Earth after Us: What Legacy will Humans Leave on the Rocks?* all feature a historian, archivist, or geologist who looks back on our present moment from a distant vantage point in a dystopian future which is irrevocably marked by climate change, and in which humans have all but disappeared.

To illustrate briefly with the first of these: *The Age of Stupid* was produced in the run-up to the Copenhagen climate summit in 2009. It is a drama/ animation/ documentary hybrid, featuring an old man living alone in the devastated world of 2055. He asks himself why climate change was not stopped before it was too late, and watches old footage from our time, assembled in a cautionary tale about the way in which humans have destroyed the world. As Craps comments, our culture of consumerism is rather unsubtly presented as to blame. However, the fictional framing device introduces feelings of regret, sorrow and guilt, and this brings the film to life.

The Age of Stupid and Craps' other case studies of future chroniclers who tell the tale of the human species and its demise (or near-demise) prompt him to ask why contemporary culture has this tendency to address and understand climate change through a fictional future history of the present. He notes that it offers a way of

making the elusive phenomenon of climate change tangible and morally salient. This is true, but it remains a curiously indirect way of doing what cli-fi authors do: that is, extrapolating from current trends and reflecting the likely consequences of climate change, exploring the attitudes and behaviours which drive developments, and speculating on humanity's ability to adapt.

Craps argues that fictional future history is a particularly apposite narrative device in the Anthropocene, because the Anthropocene concept is itself premised on the idea that there will be a time after the end of humans when, due to our profound impact on the planet, our former existence will be discernible as a geological layer. Looking back from the future is therefore an inherent part of it. Craps also argues that anticipatory memory is a characteristic of contemporary culture. We have come to live the present as the object of a future memory, taking photos on our mobiles instead of living in the moment. The depresentification of lived experience which this anticipation of retrospection entails is a feature of contemporary life.

It should not then be surprising to find anticipatory memory appearing in climate fiction. However, this is not the only way that history and memory feature in climate fiction, and looking at others might add to our understanding of the part played by memory in shaping our response to the challenge of climate change.

In a number of novels, Maja Lunde's *The History of Bees* for instance (published in 2015), stories set in the present or the future are juxtaposed with others set in the past. Lunde's aim appears to be in part to reveal the values, attitudes and behaviours driving climate change, while evoking its potential consequences in the future. David Mitchell's *Cloud Atlas* (2004) interleaves stories in past, present and future in complex and clever ways. Mitchell charts the phases of societal progression before looping back in reverse chronological order to a past now changed by what is yet to come. Memories from the yet-to-come dystopian future form the basis for the establishment of a critical future utopia, and enable a reversal of decisions in the past and present.

But I'm going to focus now on two novels concerned with *loss* of memory and its consequences. In the first, the Swiss author Max Frisch's proto-climate change novel, *Man in the Holocene*, seemingly permanent and immutable components of the natural environment are shown to be subject to dramatic change over time. References to shifting tectonic plates, changes in the world's temperature, erosion, and the emergence and extinction of species are juxtaposed with passages revealing the decline of the mental and physical faculties of an elderly man. Water and memory are also the twin focuses of the second novel, Emmi Itäranta's *Memory of Water*, but this time it is a shortage of water rather than an excess. Loss of knowledge of the past and its recovery go hand in hand with crippling drought and the promise of its alleviation.

3. Memory in Max Frisch's *Man in the Holocene*

Max Frisch's story is set in the Italian-speaking area of Switzerland near Locarno and Lago Maggiore, which is famous for its majestic mountains and picturesque wooded valleys. The 73-year-old Herr Geiser has been living here alone since the death of his wife. His daughter would like him to move back to a flat in Basle where she could look after him. But he has been managing so far.

The text consists of short statements about Geiser written in the third person, and excerpts which he makes from the books he is reading. We have to read between the lines and deduce how Geiser is feeling from fears which we are told he dismisses, and to work out what is happening by filling in the gaps between the

fragments of narrative. We also have to guess at why he chooses the passages which he extracts from his 12-volume encyclopaedia and books on local geology, climate and history. Geiser starts by writing out snippets of information, but soon turns to cutting out pages from books, which he arranges on the walls of his sitting-room, fixing them with thumb tacks and sello tape.

It is July, and after weeks of drought it has been blowing a storm and pouring rain for days. The village is cut off from the outside world by a rockfall blocking the road. “No one believes in a landslide burying the village”, we are told, but streams gush down past Geiser’s house which have not been there before, and he hears reports of a landslide in another part of the valley which has swept away a sawmill. Geiser anxiously scans the hillsides to check for cracks appearing in the sodden soil. He reflects that the glaciers in the Alps are retreating and New York will one day be flooded by rising sea levels from ice melt in the Arctic, and imagines the valleys becoming flooded, with only the peaks of the Alps remaining above the water. However, this is not a book about anthropogenic climate change. Frisch does not mention carbon emissions or reflect on the part human actions play in global warming and extreme weather. It is simply that nature is constantly changing.

The weather undermines Geiser’s mental and physical health. Already in the first few pages we learn that he is forgetting things: this is drawn to our attention by comments such as “Loss of one’s memory would be awful” (p. 13). To begin with, Geiser’s memory loss seems to be a result of his isolation: as with us in lockdown, he forgets what day it is. Some of his forgetfulness is touchingly comic. But he becomes increasingly anxious, and begins to think of hiking over the mountain to get to the next village where he could catch a train to Basle.

One morning he sets off with raincoat, umbrella and rucksack. He trips over roots, gets his feet wet crossing streams in flood, and loses his way descending into the next valley. Hours pass, and he is wet, cold and tired. When he has almost reached the village of Aurigeno and can hear the church bell ringing below, he turns around and starts the long steep climb back up to the pass. We are not told why: perhaps it is because going to Basle would have meant acknowledging he is no longer capable of living alone. Geiser is completely exhausted by the time he makes it home around midnight.

The morning after this futile hike, Geiser wakes up to find himself lying on the floor. He has had a stroke. His behaviour becomes increasingly bizarre: he doesn’t answer the phone and refuses to open the door when neighbours come by to see if he’s alright. He roasts his cat (which has been pestering him for food) in the fire and tries to eat it. At the end of the story, his daughter arrives from Basle, sees the state of affairs and takes charge.

Man in the Holocene was initially read as a study of ageing, and the decline in Geiser’s grasp of reality was seen as reflecting the precariousness of human control over the natural environment. Geiser is especially interested in dinosaurs, and Frisch associates him with them, implying humans too will one day become extinct. Frisch’s nuanced use of the third person narrator, at times relaying Geiser’s thoughts, and at others commenting on them from outside, was seen to convey the process of his mental decline particularly effectively.

But the prominence of geology and Frisch’s location of human existence in the context of deep time have attracted renewed scholarly attention in the last ten years: Gabriele Dürbeck, Bernhard Malkmus, Tom Ford, Oliver Völker and others have revisited the novel in the context of debates on the Anthropocene. In their readings, Geiser stands for a humanity which is beginning to recognise that it is undermining

the foundations of its future existence through consumption of natural resources, pollution and failure to address climate change. Geiser is fascinated by the idea of a world without humanity. However, he reflects more on the period before, rather than after human existence. This makes the novel interesting in the context of debates on the role of memory in addressing climate change. *Man in the Holocene* invites interpretation as a critique of modern man facing his demise through over-reliance on technical rationality and *neglect of memory*, resulting in short-sighted exploitation of the natural environment.

"There is no knowledge without memory", we are told (14). Geiser learns from his reading that the area was subject to frequent flooding in the past. He notes that historical disasters in the region (floods, landslides and avalanches causing destruction and loss of life) have soon been forgotten, and the memory of them suppressed in a rush to rebuild (23). Our failure to remember both human experiences of disaster and that the earth existed before us stands in the way of our appreciating the precariousness of our position in the world.

The memory needed for perception of changes in the environment and the dangers they present is preserved in geography and history books. But it is also inscribed in the landscape, which can be read as a geological and archaeological record of the past. Both forms of memory again play a part in the second novel which I want to discuss.

4. Emmi Itäranta's *Memory of Water*

As a coming-of-age story of a teenage girl, set in a dystopic future world suffering the consequences of climate change, this resembles young adult novels such as Saci Lloyd's *Carbon Diaries*. But it is distinguished from them by its poetic imagination, sensuous evocation of the sight, sounds, smell and taste of water, and presentation of water as a repository, medium and agent of memory of the past.

The story is set in a village in Finland. Pollution and global warming have resulted in an acute shortage of fresh water. The military government is using water rationing as a way of intimidating the population and keeping them under control. In their desperation, people suffering from drought and water-related illnesses build illegal water pipes: if caught by the water guards, they are first isolated and then executed. Noria, the narrator, has been trained by her father as a Tea Master. Because their profession demands access to pure water, Tea Masters are traditionally guardians of springs and "watchers of water". It is only a matter time before the authorities discover the secret of the spring in the hillside above Noria's home.

In Itäranta's novel, water is more than just an element essential for human life. It is a living force exemplifying the autonomy of nature. Water will never be bound by man-made chains, we are told: it belongs to everyone and no one. As such it is a source of emancipatory inspiration. This is the story of a female voice raised against oppressive patriarchal forces, but it is also one of how traditions and forms of art celebrating water (exemplified by the tea ceremony) can stand up to corrupt power-holders. And it is a tale about the importance of preserving collective memory. Noria dies in the end, but her sacrifice is not in vain: she gathers information about potential water reserves which the authorities are suppressing knowledge of, and enables this knowledge to be passed on to dissident groups who may be able to use it to overthrow the military government.

The title of the book, 'memory of water', is worded in such a way as to refer simultaneously to this remembering of forgotten water resources, and to water's (and the planet's) ability to remember things. Itäranta endows the Earth with memory in

two ways. First, there are the “plastic graves”, rubbish dumps which the pre-disaster “past-world” has left behind. The villagers scavenge for reusable objects and material in these repositories of broken and discarded twentieth and twenty-first-century consumer products. They constitute a *material memory*, an archive which includes potentially valuable clues about past events. It is here that Noria finds audio tape cassettes and CDs from which she first learns about a secret, illegal scientific expedition back in the Twilight Century which separated the present from the past-world.

The second way in which the Earth remembers involves water. Water might seem a strange medium to present as preserving the past, because it changes its shape ceaselessly. In reality it can, however, reveal the traces of past pollution in chemical tests, or their absence. Itäranta alludes to water’s literal ability to archive the past in a passage where Noria’s mother says there may still be islets of ice floating in the Northern Ocean carrying memories of the past-world locked within them (41). But it is the presence of unpolluted water which is important in the novel. The Jansson expedition discovered that in the Lost Lands of northern Scandinavia, which have supposedly been irredeemably contaminated by the oil wars of the past, huge quantities of water were becoming drinkable again through spontaneously biological recovery. In Itäranta’s novel these memories and imaginations of forgotten water resources find ultimate vindication in a further set of CDs which have been hidden in a sealed box at the bottom of the secret spring. Concealed here by Jansson and his fellow scientists before they were caught by the authorities, the box is discovered by Noria when the water in the spring drops below its usual level. The waters of the spring thus literally preserve memory of the past.

Serving and drinking tea is presented as a way of attuning oneself to the life force in nature: savouring it and letting it course through the body connects one to earth and sky (32). But in the novel it also stands for the cultivation of memory. The ‘memory of water’ in Itäranta’s novel is an extended metaphor. Things that happen are imprinted on the memory of the world, we are told (94), and Noria’s father recounts a story written down by old tea masters which tells that “water has a consciousness, that it carries in its memory everything that’s ever happened in this world, from the time before humans until this moment, which draws itself in its memory, even as it passes” (90).

As in *The Age of Stupid*, Itäranta approaches our efforts to understand the future by telling a story about someone in the future trying to reconstruct the past. However, she emphasises the role of imagination in this quest. Noria recognises that books are a source of valuable information, but she treasures especially those that help her imagine the sensation of coldness and the sight of snow. She tries to understand why people in the past-world behaved as they did, recklessly consuming resources, ignoring climate change, and throwing things away rather than recycling them. “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 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). This passage sums up the author’s aim to trigger imagination of the climate-changed future, and thereby facilitate behavioural change in society.

5. Conclusion

Nietzsche famously attacked the fact-obsessed historical practice of his day in *Zum Nutzen und Nachteil der Historie* (1874), writing of the need to develop a form of memory that served the needs of life, the present and the future. He called for a selective remembering, and a mix of 'monumental' history (motivating through life models), 'antiquarian' history (fostering a positive sense of collective identity) and 'critical' history (enabling us to recognise mistakes made in the past and learn how to avoid them). Frisch and Itäranta can be said to contribute to the kind of memory Nietzsche advocated, by recalling the past to imagine the future. In Frisch's case this involves calling to mind a pre-human past. As Tom Ford has put it, at the same time as demonstrating the subjection of humans to the natural processes of ageing and decay, Geiser can be viewed as "a pioneer of a new climate change sensibility, a potential model for the cognitive negotiation of a changing geological order" (28).

For her part, Itäranta invents a fictional past which is recalled from a more distant future. She uses the device of anticipatory memory, but in a non-realistic way. The memory of water in Itäranta's novel can be understood as a symbolic extension of the real planetary memory of climatic changes preserved in the air bubbles in ice cores over the last 800 000 years and in the other biological, physical and chemical proxies by means of which scientists calculate the earth's temperature in the past. The environmental sociologist Bron Szerszynski has also argued that our understanding of memory can be expanded to embrace earth processes. Memory can be reconceived so as not to presuppose a subject possessing consciousness. In 'How the Earth Remembers and Forgets' (2019), Szerszynski discusses the forms and systems of memory which the Earth possesses, how its memory is stored in energy, matter and space, and the different kinds of remembering and forgetting found in solids, liquids and gases. There is also a parallel between memory in Itäranta's novel and what theorists of material ecocriticism such as Serenella Iovino and Serpil Oppermann have called "material memory", i.e. the geological and archaeological memory of the earth. This has led one scholar at least (Azkanat) to write of a planetary "mnemonic agency".

But I don't have time to go into these ways in which the idea of water possessing memory may be less fanciful than first appears, and it is ultimately beside the point. In comparison with the futures remembered in *The Age of Stupid*, *The Collapse of Western Civilisation*, and *The Earth after Us*, that in *Memory of Water* is highly implausible. It is unlikely that Scandinavia will one day be, as Itäranta imagines, a province of the Chinese empire. Experts also say that it is among the fortunate parts of the world more likely to benefit from global warming than to suffer from crippling drought. But it would be wrong to judge the novel by the yardstick of literary realism. The relocation of the Far Eastern tea ceremony to Finland, and Itäranta's spurious attribution of a series of epigraphs to an ancient Chinese philosopher whose name turns out to be a kind of tea (oolong) are clear enough markers that the story is a fable, not to be taken literally.

The memory of water in Itäranta's book is then openly fictional and metaphorical. But she is not the only novelist to imaginatively extend the idea of earth memory in this way. The essays in the volume *Planetary Memory in Contemporary American Fiction*, edited by Lucy Bond, Ben de Bruyn and Jessica Rapson, show how American authors have striven similarly to imagine modes of 'planetary memory' which give form to the complex interrelations in the Anthropocene between human and non-human worlds and between historical and geological pasts, presents and

futures, and do justice to the links between cultural memory and the public's anxious anticipation of the future on an increasingly fragile planet.

Man in the Holocene and *Memory of Water* exemplify different literary strategies, but they both do what Lawrence Buell called "environmental memory work" in his 2007 lecture, 'Environmental Memory and Planetary Survival'. Examining a range of texts which perform "artistic acts of simulated recollection that thereby inevitably reinterpret and in some sense enhance and/ or critique empirical findings", Buell discussed the interplay of memory, imagination and creative shaping, and their role in promoting awareness of environments. Reading environmental literature as "an art of memory-making or evocation", Buell spoke of "flexibility to frame alternative scenarios of environmental memory" as one of art's strongest suits. He suggested that nature writing and environmental fiction constituted "a critical discourse of re-enchantment", with authors positioning themselves against the environmental amnesia which is stronger than ever in today's age dominated by technological culture. And he concluded that environmental memory with its correction of the "hallucination of human autonomy" is important for world citizenship, because of the part it plays in "fuelling active desire to keep the planet habitable". Recalling the past so as to imagine the future contributes to this important literary project.

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