The Loss of Earth as a Stable Point of Reference: Communicating Climate Breakdown with Holocene-Anthropocene Blends

study submitted in part fulfilment of the requirement for the award of
Doctor of Philosophy

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Abstract

The Loss of Earth as a Stable Point of Reference: Communicating Climate Breakdown with Holocene-Anthropocene Blends

Lughán Odlum Deane

This thesis develops a novel concept in climate change communication: Holocene-Anthropocene blends. The thesis is fundamentally about the relationship between units of human culture and the aspects of nature they are premised upon. On the one hand, the research suggests that, because elements of culture, think of metaphor for instance, are often based on aspects of nature, when those aspects of nature change, the metaphors premised upon them are rendered anachronistic. These elements of culture, which I term ecocultural anachronisms can then be leveraged to communicate climate breakdown in a compressed and compelling way.

At the same time, the research suggests that many aspects of nature – Summer for instance, or sea ice – that have relatively stable cultural connotations in particular cultural contexts take on entirely new meanings as they are fundamentally altered by climate breakdown. The result of this is that these aspects of nature become bisociated. It is possible, for instance, to think of a conventional cultural model of Western summer in which it is the season of romance and joy. At the same time, because of increasingly common periods of extreme heat, drought and forest fire, a novel, negative cultural model of summer is emerging. In this novel model, summer is a season of discomfort and danger. The co-existence of these two cultural models (and summer is just one example) again offers climate communicators an opportunity to leverage this emerging polysemy.

This research studies these ideas of ecocultural anachronism and bisociation through the framework of conceptual blending theory. It also studies instances of climate communication that leverage these dynamics in order to understand how they work. The research also introduces a number of novel previously undocumented emerging metaphors which are based on aspects of nature that have emerged as a result of climate breakdown. This is further evidence of the ways in which climate breakdown can be seen at the level of cultural concepts.

This thesis also demonstrates practical applications where I put a number of the insights and dynamics identified in the research into real-world use in order to further explore how they work and as further demonstration of their usefulness to climate communicators.

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Chapter 1: Introduction

1.1 Research Context

The context in which this research takes place is best captured by the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report. In that report, the IPCC states that anthropogenic climate change has caused global warming with global surface temperature about 1.1 degrees centigrade above 1850-1900 averages (IPCC, 2023, p.4). Global temperature, the report states, has increased faster since 1970 than in any other 50-year period over the last 2000 years (IPCC, 2023, p.4). The result of this warming, the IPCC states, is that "Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred" (IPCC, 2023, p.5). Sea levels have increased by an average of 0.2m between 1901 and 2019 (IPCC, 2023, p.5). The rate of this rise has increased over time. Meanwhile, clear evidence has emerged that human-caused warming has caused extremes of weather including intense heat waves, droughts and powerful storms (IPCC, 2023, p.5). It is likely that heating will exceed 1.5 degrees and even 2 degrees above baseline levels in this century (IPCC, 2023, p.12). There is, in fact, some evidence to suggest that we have already moved beyond 1.5 degrees of warming (Copernicus Climate Change Service (C3S), 2025). Cumulative emissions mean that even a major and concerted near-term effort to reduce global emissions will not prevent additional warming occurring until about 2040 (IPCC, 2023, p.12). Nonetheless immediate and radical reductions in emissions are needed if the worst outcomes are to be avoided. The report states that "There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all" (IPCC, 2023, p.24). As a result, urgent and accelerated climate action now is of immense planetary value.

1.2 Research Aims

This is a project focused on communicating climate breakdown. This is a study on a particular type of climate communication. My focus is on climate communication that takes advantage of instances where climate breakdown causes a gap to open up between the cultural model of a given phenomenon and the climatic reality of that same phenomenon. So, for example, in a case that I will discuss at several points through this work, summer goes from being thought of as a season of comfort, leisure and joy to one of fear, hardship and discomfort as climate breakdown makes extreme heat more common. With this central concept as my core focus, I seek, through this work, to achieve a number of research aims:

(i) I analyse existing pieces of climate communication that I see as leveraging this core phenomenon in order to understand how they work and what role this phenomenon plays in them.

(ii) I analyse this kind of communication through the lens of Conceptual Blending Theory in order to situate it within an existing theoretical framework in the field of communications. This also helps me move from a series of linked observations towards a repeatable communicative mechanism or model.

(iii) With this model derived in this way, I consider how climate communicators might seek to identify and leverage similar examples in the future.

(iv) I engage in some communications practice using this phenomenon as a starting point in order to begin to test audience reception of it.

This research rests on some key premises. The first has to do with the idea that human cultures have long taken advantage of climatic regularities to produce meaning. The seasons, for example, are freighted in various cultures around the world with rich matrices of meaning that are only possible because the seasons themselves are, in broad terms, stable and predictable enough to form the basis of such units of culture.

The central question I seek an answer to in this project is what happens when that taken-for-granted predictability, not only in the case of the seasons but in relation to all sorts of natural phenomena, begins to give way. I ask this question from the point of view of climate communications. As such, my primary interest in it is in discerning the extent to which these moments of dissonance and mismatch might function to precipitate knowledge and awareness of climate breakdown.

The second key premise for this project is that we do, in fact, find ourselves in the early stages of such a giving way. What aspects of human culture took to be timeless certainties of the natural world are proving, because of climate breakdown, to have been contingent and temporary. At the same time, all sorts of new, uncharted natural phenomena emerge.

I am interested in exploring what happens to the units of culture – metaphors, myths, stories etc. – that have set up cultural camp around an idea like ‘summer’ in a time when summer itself is experiencing a fundamental change in character (this, of course, is more true in some parts of the world than others). At the same time, I am interested in exploring how new emerging aspects of nature brought about by climate breakdown make their way into culture as novel metaphors or tropes.

Throughout, my focus is on how these sites of destabilization and emergence offer windows into seeing climate breakdown underway. I explore how climate breakdown distorts, unmoors and also produces aspects of human culture. I suggest that at these sites of distortion, unmooring and production, novel cultural phenomena emerge and that these novel phenomena constitute a means of seeing and communicating the vastly complex issue of climate breakdown in a compressed and compelling way.

This project is premised too on the idea that, largely because of climate breakdown, we are today at a kind of threshold between two worlds - an old, familiar reality and a new, unfamiliar one. This thesis argues that we have cultures fundamentally adapted to the old world that, in places, are rendered anachronistic and discordant in the new world. At the same time, new units of culture emerge in response to the novel and uncanny realities of the new world. Raymond Williams’ triad of residual, dominant

and emergent cultures provides a useful analogous framework for thinking about these ideas. According to Williams, the dominant culture of any given time and place is always inflected with the residue of older cultures and with the emergent forms of coming culture (Williams 2010). For Williams this is an entirely cultural or social process. What I point to here is a sort of nature-culture equivalent to Williams' pattern. As the climate breaks down, old cultural constructions are outmoded but linger on as a sort of residue. At the same time, new patterns of climate give rise to a new and uncanny set of emergent units of culture.

This work (i) analyses pieces of climate communication that make use of this fundamental dynamic of mismatch or falling out of sync; (ii) seeks to move from observation and analysis of existing examples to a model that offers a blueprint for other communicators into the future and (iii) tests some of these ideas through the production and dissemination of real examples.

1.3 Introduction to the Problem

Communicating climate breakdown is notoriously difficult. It constitutes, in the words of Ezra Markowitz and Meaghan Guckian, a sort of "perfect communications storm" (2018, ch.3, section 3.2). As with all perfect storms, several factors combine to produce this communicative difficulty. It might be said, though, that they fall roughly into two principal categories.

The first has to do with the idea of compression. The conventional account of why climate breakdown is so difficult to communicate or to convey has to do with the fact that it is often "Slow-moving, long-term, complex, abstract" (Markowitz & Guckian, 2018, ch.3, section 3.2). The impacts of climate breakdown are diffuse and attribution of them is difficult. Timothy Morton captures this well when they say that climate change is "massively distributed in time and space" (Morton, 2013, p.48).

Climate communication, as a consequence, is often a matter of trying to compress climate breakdown into a smaller, more easily perceived narrative package. Jeff

Orlowski's celebrated documentary *Chasing Ice,* for example, uses compression to tell the story of climate breakdown (Orlowski, 2012). In it, James Balog and his team remotely capture photographs of melting glaciers. These photographs are then used to create visually arresting time lapse videos of glacial retreat, which form the backbone of the film. In the film, then, the technique of time lapse is used to compress time, thus rendering the temporalities of climate breakdown more legible to us.

Artist Olafur Eliasson and geologist Minik Rosing take a similar yet different approach to compression in their project *Ice Watch.* In that project, the artists installed real blocks of glacial ice outside London's Tate Modern gallery (Yalcinkaya, 2018). The project, which coincided with Cop24 was designed to visit upon Londoners the reality of Arctic sea ice loss (Yalcinkaya, 2018). Once again, this project seeks to communicate climate breakdown via compression. Though there is some time compression in this example, the primary focus here is on collapsing distance. The artists seek to collapse the distance between a Western population centre where people live high emission lifestyles and the (sub-) Arctic where the negative effects of those emissions are both amplified and highly visible.

Moving beyond ice, Amitav Ghosh provides a related example. Seeking to communicate climate breakdown through the form of a novel, Ghosh chooses to set his climate novel *The Hungry Tide* in the landscape of the Sundarbans, the great mangrove forest in India's Bay of Bengal. Ghosh does this, he explains, because the nature of the Sundarbans is such that "geological processes that usually unfold in deep time appear to occur at a speed where they can be followed from week to week" (Ghosh, 2016, Part 1, Section 2). The Sundarbans, in other words, provide a setting in which the kinds of changes that climate breakdown will produce globally over years or decades occur on timescales much more amenable to human perception and comprehension. Ghosh finds a microcosm - the Sundarbans - in which geological timescales appear to be accelerated up to visible human timescales.

In a similar vein, Adam McKay, in his 2021 film *Don't Look Up* sought to find a way of compressing climate breakdown into a more comprehensible package. In this case,

the mechanism involved was to find a metaphor or allegory for climate breakdown that allowed the story to be told on a much shorter timeline. The film tells the story of a meteor on a very short collision course with Earth (McKay, 2021). It uses this story as allegory, as compression, for climate breakdown. The diffuse effects of the climate crisis are compressed into the figure of the asteroid and the time scales involved in averting the climate crisis are reduced to the scale of weeks.

The other, second, principal reason that climate breakdown is so difficult to communicate is not universal to all people but, instead, is one that pertains more to the West or wherever Euro-American culture is dominant. This is the difficulty explored by Ghosh in his *The Great Derangement.* Ghosh's argument suggests, in essence, that the combination of the relative climatic stability of the Holocene epoch with European ideas about calculability and order that emerged during the Enlightenment led to a sort of grand-scale blindness towards the unpredictability of nature in the West. The (relatively) stable, predictable climate of the Holocene, combined with Enlightenment ideas about mastery over nature produced a derangement at the heart of Euro-American culture. I explore this derangement further in subsequent chapters.

In short, however, it represents a sort of backgrounding of nature. Climatic stability and ideas about calculability, mastery and fungibility led to nature being cast as a sort of inert backdrop to the affairs of humanity. Nature was abstracted - Western science comes to rely on the abstract notion of a specimen, the idea that, for example, one individual member of a species can be studied and understood as proxy for an entire species. At the same time, merchant capitalism comes to rely on an abstracted, fungible nature: the idea that one bushel of corn is essentially identical to another is at the root of the system. The result of this backgrounding and abstraction, Ghosh argues, is a form of blindness in which it has been forgotten that nature is not a backdrop and can be a protagonist too. Ghosh argues that the inert-ness of nature is baked into Euro-American modes of representation and perception in such a way that climate breakdown - the loss of that taken for granted stability and order - is essentially illegible within Western paradigms.

In this project, I aim to develop a model of climate communication that addresses these fundamental challenges. My focus is on those moments where some element of human culture that takes for granted, as background, an aspect of nature is suddenly unbackgrounded and rendered mismatched as a result of climate breakdown. The principal subject and interest, then, of this research is on the ways in which climate breakdown produces culture-nature mismatches and, in turn, how these mismatches can be used to see and communicate climate breakdown. This model of climate communication represents an effective way of addressing both the 'derangement' and compression problems associated with communicating climate breakdown.

In terms of Ghosh's 'great derangement', these culture-nature mismatches are produced precisely by a process that might be thought of as 'unbackgrounding', the very inverse of the backgrounding that Ghosh sees as leading to the derangement in the first place. My focus is on the ways in which elements of human culture, particularly Western culture (though not exclusively) take for granted, as background, certain elements of nature, of the climate. Again, Ghosh's derangement is, primarily, a Western affliction. Moreover, it is Western attitudes towards nature that have, historically been, and continue to be today primarily responsible for climate breakdown. My interest is on what happens to these cultural phenomena as the corresponding natural phenomena around which they have set up camp begin to shift and change. Both *Ice Watch* and *Chasing Ice* seek to tell the story of climate breakdown through a sort of case study of glacial melting. This same phenomenon can be seen through a case of culture-nature mismatch. Consider, for instance, how the cultural model of glaciers encapsulated in the conventional metaphor of 'glacial pace' takes for granted, as timeless background, an idea of glaciers that climate breakdown is increasingly revealing as temporary and contingent. Or, framed another way, climate breakdown produces a new cultural imaginary of glaciers as threatened and in need of urgent help that clashes with the cultural imaginary of glaciers encapsulated in the metaphor. Thought of either way, the metaphor lingers on even as the world it relies on for its meaning disintegrates.

This 'glacial' example helps demonstrate how nature-culture mismatches offer a powerful way of compressing the story of climate breakdown. What is happening in

the case of the metaphor of ‘glacial pace’ is effectively twofold. On the one hand, the metaphor falls out of sync with the reality it emerged from. At the same time, a novel cultural model of glaciers grounded in contemporary discourses of climate breakdown emerges. The result, in effect, is that English speakers (though similar metaphors exist in other languages e.g. the French ’rythme glacial’) carry around two contradictory cultural mental models of glaciers - an old, conventional one in which they are slow and predictable and a contemporary one in which they are bespoken by high-speed volatility. Another way of saying this is to say that glaciers - culturally speaking (at least in the West) - have become “bisociated” (Koestler, 1964, p.35). In other words, today, cultural glaciers exist in the West as nodes within (at least) two separate cultural networks - in one they are the very essence of slowness and inertia, in the other, they are disappearing with great speed. As such, we can imagine compressed into an idea like ‘glacial pace’ two climatic contexts - an old familiar one and an emerging strange one. In the context of old, conventional ‘Holocene’ glaciers, the metaphor fits; in the context, however, of new, melting glaciers it doesn’t. Once bisociated, a metaphor like ‘glacial’ is caught in a sort of twilight zone between two climatic regimes. As such, I will argue, it becomes a kind of portal- a compression - through which we might gain a sort of global insight into the planetary scale shift underway.

I conceive of these instances of mismatch as a sort of **climate breakdown in our second nature**, an idea I explore in more detail in the next chapter. In *Chasing Ice* Balog and colleagues suffer real hardships and setbacks in trying to get their time lapse cameras into location and to collect the images from them. *Ice Watch,* meanwhile, involved the transport of many tonnes of ice from Greenland to London by cargo ship. My goal in this research is to explore and develop a mechanism for creating compressions of climate breakdown that need not involve such trials or feats. Rather than venturing out with time lapse cameras or towing icebergs for hundreds of miles, we can work with the glacial ice we all carry around with us already. The ‘glacial’ metaphor is, of course, just one example, and it happens to be a conceptual or metaphorical example. All sorts of elements of culture, however, from words to buildings and from maps to traditions, find themselves in a similar position of mismatch. Like the glacial metaphor, they are, in effect, trapped in a sort

of twilight. They are relics of an old world increasingly unmoored in a strange new reality.

In this project, I consider how these instances of mismatch can be mobilised for climate communication. In particular, I demonstrate that they can be particularly effectively mobilised via what Gilles Fauconnier and Mark Turner refer to as "conceptual blends" (Fauconnier & Turner, 2002). I will introduce conceptual blending theory more fully in subsequent chapters, but in general terms I suggest that conceptual blends are an effective way of mobilising these instances of climate breakdown in second nature for communication because they operate on the basis of bisociation and represent a "compression tool *par excellence"* (Fauconnier & Turner, 2002, p.114).

1.4 Expanding Elizabeth Rush's notion of 'Passwords'

In a sense, this project takes a basic dynamic, of which Elizabeth Rush recognized one instance, and expands it - in multiple ways - to become a broader theory of climate communication. In her book on rising sea levels - *Rising* - Rush develops a concept of what she terms a 'password'. Rush explains that the name of the Tupelo tree became a sort of password for her as she was observing the impacts of sea level rise in Rhode Island marshland (2018, p.2). The reason for this, she explains, is that the name of the tree - Tupelo - etymologically suggests a certain normative environment. The name Tupelo, she writes, "comes from the Creek *ito* and *opilwa,* which, when smashed together, mean "swamp tree" (Ibid). As such, Rush goes on, "Built into the very name of this plant is a love of periodically soaking in water" (ibid). The name suggests a certain environment, a certain kind of topography.

When Rush visits the Rhode Island marshlands, she discovers the Tupelos there have died. They have perished because they have taken in too much saltwater. This saltwater has been seeping into the marshlands as a result of sea level rise. Rush writes about the strange feeling of wandering "in a landscape we do not yet have a name for, a marsh inundated by too much of the very thing that shaped it" (Ibid, p.5).

Similarly, the Tupelos - the water trees - have been killed by overexposure to water - to the very element to which they are adapted. The tree's name becomes, for Rush, a "portal" - it is, she writes, the stone she picks up and puts in her pocket to remember. Tupelo becomes a password to a "previously unimaginable awareness" (Ibid, p.2). As Rush puts it, "When we say the word *tupelo* we begin to see that both the trees themselves and the very particular ecology they once depended upon are, at least where they are rooted, gone" (Ibid).

I am interested in the mechanism by which Rush's concept of the password works. This mechanism, I argue, is fundamentally about a kind of bisociation. Tupelo comes to have two meanings at once. Baked into its very etymology is one meaning - the Tupelo is the swamp tree, a tree that thrives in wet marshlands. At the same time, Tupelo refers to the "ghostly silhouettes" and "bare limbs" that Rush encounters (Ibid). In this second meaning, Tupelo is the tree that is mal-adapted to its environment. As such, the single word - Tupelo - takes on two distinct and even contradictory meanings.

In this context, the word can be read as a sort of blend. What might be thought of as its conventional (Holocene), meaning is there in the form of its etymology. At the same time, Rush provides a rich account of its novel (Anthropocene) meaning. The word becomes a sort of fulcrum point around which two climatic realities are arranged.

I see Rush's basic dynamic of the password as a valuable and promising one for communicating climate breakdown. In this project, I set out a model of climate communication that relies on the essential dynamic set out in Rush's example. I suggest, however, that the dynamic Rush identifies can be extended beyond words alone and to other units of human culture. As such, ideas, metaphors, buildings, or traditions can all, like Tupelo, fall out of sync with their environments and, as such, become 'portals' through which we might be able to glimpse the planet altering effects of climate breakdown.

In the next chapter, Chapter 2, I provide some background and introduce the key ideas and frameworks through which this project operates. In Chapter 3, I discuss

the methodologies used in this project. In Chapter 4, I present a close-up analysis of an example of climate breakdown in second nature via an examination of the ‘glacial metaphor already introduced. In Chapter 5, I look in detail at some examples of climate communicators using instances of climate breakdown in second nature as the basis of conceptual blends in order to communicate climate breakdown. In Chapter 6, I consider, in a practical sense, how to find instances of climate breakdown in second nature and, once found, how, again in a practical sense, they might be mobilized into blends for communication. In Chapter 7 I turn from looking at the ways in which climate breakdown has unmoored and undermined Holocene elements of culture and look, instead, at some new, emerging ‘Anthropocene’ metaphors. Throughout, I provide some examples of climate communications practice using the insights generated through this research. Finally, in Chapter 9, I conclude and consider some areas for further research.

Chapter 2: Introduction to key ideas and Frameworks and Review of Literature

2.1 The Loss of Companion World

One major framework for thinking about climate breakdown from a human perspective is to think of it in terms of a loss of our “companion world” (Whale & Ginn, 2017, p.100). This, for instance, is what Bill McKibben seeks to get at with his notion of “Eaarth” (McKibben, 2010). McKibben writes that climate breakdown has “taken us out of the sweet spot where humans so long thrived” (McKibben, 2010, ch.1). He says that “the world hasn’t ended, but the world as we know it has - even if we don’t quite know it yet” (McKibben, 2010, ch.1). He goes on to say that “The planet on which our civilisation evolved no longer exists. The stability that produced that civilisation has vanished” (McKibben, 2010, ch.1). Elizabeth Rush echoes this idea. She writes about climate breakdown heralding “if not to the end of the world then certainly … the end of one world” (Rush, 2018) . The world is not completely different, McKibben points out, it is still familiar, still Earth-like. Nonetheless, it is different enough that, he argues, it needs a new name. McKibben proposes ‘Eaarth’. Eaarth is the name for this new reality which is “odd enough to constantly remind us how profoundly we’ve altered the only place we’ve ever known” (McKibben, 2010, ch.1). Key to both of these ideas is the sense that we are becoming unmoored from what might be thought of as our companion world, that we are moving beyond the normal range of reality to which we have become so completely accustomed.

We are today at a kind of threshold moment, in a twilight between two realities: no longer fully in the old familiar world but not yet fully in the strange new one either. This is the animating idea behind the notion of the Anthropocene. The idea of the Anthropocene suggests that we are on the cusp of a new reality, a new climatic context, brought about by humanity’s impacts on the world (Pavid, 2018). The last 11,000 years or so of human culture have unfolded in the context of the Holocene.

This Holocene epoch has been marked, above all else, by comparative moderation of extremes (though there have, of course, been local and temporary exceptions) (McKibben, 2010). In the recent past, the twin crises of climate change and biodiversity loss have meant that the climatic stability that characterised the Holocene is coming to an abrupt end. So dramatic is this juncture that, in the eyes of many scholars, we have effectively entered a new epoch: the Anthropocene is the name suggested for this new epoch.

While I use the notion of the Anthropocene in this project, I acknowledge that it is a contested concept. This contestation runs along a number of lines. In the first instance, the transition - from Holocene to Anthropocene - has not been formally ratified as an epoch by geologists. It has, however, been formally acknowledged as a geological event (Gibbard et al. 2022). Separately, several scholars including Andreas Malm, Alf Hornborg and Jason Moore have pointed out that the term Anthropocene is doing tacit ideological work. For instance, Malm and Hornborg point out that the ‘anthro’ in Anthropocene suggests that climate breakdown is a product of something innate and general in human nature (Malm and Hornburg 2014). Moreover, it suggests that humans at the species level are to blame. Malm and Hornborg posit the name Capitalocene as an alternative and one that names the true culprit – certain kinds of social relations between a subset of people (Ibid).

Other alternatives have also been offered. Donna Haraway suggests the Plantationocene – derived from the notion that over the course of the last 500 years, the world has come, more and more, to be organized according to the logic of a plantation (Haraway, 2015). Haraway also proposes Chthulucene to counter what she sees as the Anthropocene’s unwarranted Anthropocentrism (Ibid). I follow Haraway when she writes that, whatever name we give it, our current time is marked by “severe discontinuities” (Ibid, p.160). As such, she goes on, “a big new name, actually more than one name, is warranted” (Ibid). Haraway lists the Anthropocene as one name among those that have been proposed. In this project, I use Anthropocene because it is the name for this new discontinuous period around which the most scholarly consensus has emerged. Anywhere, however, that it appears in this project, it could – as per Haraway – be replaced by Capitalocene, Plantationocene etc. I use it as a term to denote the sense in which climate

breakdown has produced a break with the Holocene. Whether as epoch or event, the notion of the Anthropocene provides a useful shorthand. It is a useful way of referring to the recent period in which human activity has fundamentally and dramatically altered the climate. Moreover, it is the term used to denote this fundamental moment of transition that has been embraced and adopted most widely across disciplines ranging from the humanities to the hard sciences.

The Holocene is the companion world of human civilisation. Thomas Berry writes that “If we lived on the moon, our mind and emotions, our speech, our imagination, our sense of the divine would all reflect the desolation of the lunar landscape” (Thomas Berry quoted in McKibben, 1989, Part 1, Ch.2). Here on Earth this same insight holds: human culture has encoded within it a model of the Holocene environment. Along these lines, Seana Coulson has pointed out that even the most basic declarative statement - ‘the cat is on the mat’ - in some sense relies on our holding in our heads the “tacit assumption of a gravitational field” (Coulson, 2001, p.18). The environment in which we live is deeply backgrounded in language and culture. In McKibben’s terms, the Earth of the Holocene is the planet that “seems right to us” (McKibben, 2010, Ch.1). And, as a result, “every aspect of our civilisation reflects that particular world” (McKibben, 2010, Ch1). The Earth of the Holocene is, he says, “our cosy, taken-for-granted” home (2010, Ch.1). Holocene climatic conditions are a backgrounded, taken-for-granted presupposition or assumption of human cultures. The Holocene provided an environment characterised by natural rhythms and patterns predictable and repeatable enough to set up cultural camp around. The predictability of the Holocene rendered nature “a stable, unchanging, and timeless background” (Yip, 2022), a “reassuring background for human affairs” (Clark, 2015, p. 41). Holocene nature became, in Alexis Rider’s phrase, an “unremarkable backdrop” to human culture and its concepts (Rider, 2019).

Matthew Schneider-Mayerson and Brent Ryan Bellamy get at a similar idea in the introduction to their *Ecotopian Lexicon* (2019). They write that “We need to accept that what we might have imagined to be stable, consistent and normative ceaselessly shifts underfoot” (Ibid, p.2). They suggest that climate change will outmode and render anachronistic concepts in human culture. They say: “As the scale and fallout of climate change, ocean acidification, mass extinction and other

processes become increasingly undeniable and unavoidable, we will need to change our cognitive maps of the world" (Ibid). This leads them to ask a question that expresses a central concern of this research. They ask, “What are the psychological analogs of calving glaciers and drowned coastlines?” (Ibid). From there, their focus is on developing a lexicon of terms – and their concomitant concepts – with which it might be possible to capture the dissonance of a changed world and anticipate the kinds of words and concepts that might be needed to relate to emerging patterns of environment.

Understanding this central idea that climate breakdown is outmoding current concepts is enhanced with an example. Perhaps more than any other aspect of nature, the cycle of the seasons comes to serve as reference point for culture. Seasons differ, of course, in various parts of the world, but the dynamic is clearly in evidence with the Western cycle of four seasons - Winter, Spring, Summer and Autumn. Timothy Clark writes about the perceived “normativity of the seasonal/natural as a reassuring background for human affairs” (Clark, 2015, p. 41). He describes it as a universal human characteristic “to perceive familiar natural processes and their seasonal timing as a basic framework of ‘meaning’ for life” (Ibid). For artists, the seasons function as a “structuring device” (Somervell, 2019, p.45) or a “background norm” (Clark, 2015, p. 40). They are a convention which, Somervell writes, “reflect somewhat accurately the annual patterns of European weather” (Somervell, 2019, p.45). In Nick Groom’s terms, the seasons represent “a rough compromise between nature and culture” (Groom in Somervell, 2019, p.45). Only in the context of Holocene climatic predictability could the convention of the seasons emerge and stick. Indeed, Rachel Carson, in her pioneering and seminal *Silent Spring,* opens with what she calls her “Fable for Tomorrow”. In that fable, it is a breakdown in the normativity of the seasons that Carson uses to illustrate environmental breakdown. She imagines environmental degradation leading to a “spring without voices” (Carson, 2002). Nature and culture fall out of sync with one another. She imagines bird feeding stations in back gardens deserted (Ibid).

Seasons out of kilter serve as such uncanny and powerful illustrations of climate breakdown because over time, their normal predictability allows for the seasons to become “freighted with cultural, moral, and aesthetic value” (Somervell, 2019, p.45).

In the terminology of conceptual blending theory, the seasons might be said to become ‘compressions’ (Fauconnier and Turner, 2002). That is, layers of allusion, connotation, symbolism and reference are compressed down into each season such that we begin to have conventionalized cultural models of each. Sommervell writes that “each individual season [is] elevated through abstraction to the status of eternal type” (2019, p.52). From the literal seasons emerge a set of corresponding literary seasons, seasons in second nature. It is in this context that Sommervell points out that the Autumn referred to in Keats’ ode “To Autumn” “is both the specific Autumn of 1819 and a timeless abstraction that outlasts this iteration of the season” (Ibid, p.50). The poem is, in some sense, an ode to an abstracted “Personified Autumn” (Ibid) that has become associated with a certain sensibility and affect.

The idea, then, of the Anthropocene is that we are exiting a long period of relative calm and stability and entering a new one of unpredictability and volatility. This is what Isabelle Stengers gets at with her concept of the “intrusion of Gaia” (Stengers, 2015, p. 107). Writing about climate breakdown, Stengers says “Imprudently, a margin of tolerance has been well and truly exceeded” (Ibid p.45). As a result, “Gaia is ticklish” (Ibid, p.46) and is waking from her long and peaceful Holocene slumber. The relative predictability of Holocene nature - its seasonal rhythms, its scales and ranges (of temperature, wind speed and so on) - it is disintegrating. Stengers writes that in this new world, “no future can be foreseen in which [Gaia] will give us back the liberty of ignoring her” (Ibid, p.47). The notion of nature as backdrop is over.

Amitav Ghosh makes a fundamentally similar argument to that laid out by Stengers. For Ghosh, the problem arises from the fact that the Holocene was (or is) the companion world for virtually all of human civilisation. Our cultures and our very modes of perception have evolved according to the contours and patterns of the Holocene world. This allowed us, Ghosh argues, to fall for a dangerous illusion, to become deranged in our thinking. Holocene stability and predictability, it transpires, is an illusion. It has proven to be (to borrow a phrase from Ghosh) “merely a function of the providential protraction of geological time” (2016, Part 1, Ch.10). The world, in other words, was never inert, but just sleeping. We are now in the midst of a shocking and painful recognition of a long-forgotten but “already existing awareness” as it resurfaces (Ibid, Part 1, Ch. 2). This Recognition consists in moments in which

“it dawns on us” the world is not a “stage for the enactment of human history” but is, instead, “a protagonist (Ibid). Referring to Western attitudes towards nature since the Enlightenment, Ghosh says, “the humans of the future will surely understand … that only in one, very brief era … did a significant number of their kind believe that planets … are inert” (Ibid, Part 1, Ch.1). The world in which human culture emerged and crystallised is disappearing.

It is to this notion of a loss of companion world that climate scientist Patricia Romero Lankao was referring - on the occasion of the launch of the IPCC’s fifth assessment report - when she stated that “The polar bear is us” (Romero Lankao in O’Neill, 2022, p.1114). Saffron O’Neill considers this statement in an article on polar bear imagery in climate communication. She describes how the polar bear has become a ubiquitous visual metonym for climate breakdown. In particular, the image of “a bear balanced precariously on a melting iceberg” has become routine to the point of cliché (O’Neill, 2022, p.1114). The image of the polar bear is a compelling one because, clinging precariously to its ice floe, it appears as a creature in the process of losing its companion world. I discuss this motif of the polar bear more in Chapter 7. When Romero Lankao likens humanity writ large to the polar bear, however, it is likely that this is precisely the dynamic to which she refers. Just as the polar bear is losing its habitat and the conditions in which its habitat can survive, so are we.

At the heart of this project, then, is this fundamental concept of a threshold, of a twilight, of a transition between two worlds. Science fiction writer Kim Stanley Robinson uses Raymond Williams’ notion of Structures of Feeling to further explore this idea. The idea of Structures of Feeling refers to sense in which each era has its own sensibility – its own “distinct way of organizing basic human emotions into an overarching cultural system” (Stanley Robinson, 2020). Stanley Robinson argues that climate breakdown and the shift from Holocene to Anthropocene has resulted in a situation in which the dominant structure of feeling in the West has fallen out of sync with the wider world. He writes that “In our feelings, we’ve been lagging behind the times in which we live … we’ve been out of synch with the biosphere” (Ibid). Writing in May 2020, his hope and expectation was that the experience of the Coronavirus pandemic might act as a spark to instigate a new structure of feeling. This project explores the experience of existing at that transitional moment between

two structures of feeling – an old one in which nature is constructed as background and a new one in which, increasingly, that is not possible. We are leaving behind an old world - our companion world - and entering a strange and frightening new one. This fundamental duality echoes throughout the project, informing the entire analytical framework.

2.2 Creatures out of time

When Romero Lankao sought to capture, in a compelling way, the human predicament in the face of climate breakdown, she compared us to polar bears - creatures under threat. This line - 'the polar bear is us' - received enormous media coverage (for example Russel, 2014; Michaels and Knappenberger, 2014). The scale of the coverage suggests that Romero Lankao's observation is precisely correct: the image of the polar bear stranded on the ice floe is so compelling and resonant because on some level we recognise something of our own fate in it.

I introduce here another "striking visual metaphor for direct effects of climate change" (Mills et al., 2013, p. 7360) that shares similarities with that of the polar bear: the snowshoe hare. Journalist Toni Tabora-Roberts says that "Sometimes a single species' plight can help to illustrate the impacts of climate change as compellingly as melting glaciers" (Tabora-Roberts, 2013). Researchers have shown that climate breakdown is causing this species a particularly conspicuous problem. Snowshoe hares, as their name suggests, live in places where snowfall is a feature of the winter climate. Specifically, their habitat is the boreal forest where snow is a major feature of the climate, but not a permanent one. The species has developed an unusual adaptation to the forest's annual snowfall patterns. The hare has evolved to moult seasonally such that it wears a brown coat in summer and a white one in winter. This pattern of seasonal moulting means that the hare has more or less constant camouflage, always blending in with its background.

Climate breakdown, however, is producing changes in the snowfall season. Mills et al. write that "A decrease in the number of days with seasonal snow on the ground is

one of the temperate region's strongest climate change indicators" (2013, p.7360). Compared with regional climatic patterns from before anthropogenic warming, snowfall begins later and lying snow melts earlier. In the context of evolutionary time, these changes have happened remarkably fast. They have changed faster, in fact, than the snowshoe hare has been able to evolve. The result of this is that the hare's moulting pattern, evolved according to the old pre-climate change patterns of snowfall, has fallen out of sync with the new shorter snow season. In other words, the hare begins to turn white before there is any snow on the ground. In consequence, a trait evolved to function as cryptic camouflage performs precisely the opposite function, rendering the hare totally conspicuous against its background and, therefore, highly vulnerable to predation. The hares' camouflage has become what Tabora Roberts' headline writer, coining a term, calls "mis-camouflage" (Tabora-Roberts, 2013). Another way of stating the case of the snowshoe hare is to say that in the hare's companion world, the Holocene / Earth Boreal Forest, the species developed a cyclical camouflage trait in response to stable and predictable climatic patterns. In the uncanny world of the Anthropocene, of Eaarth, that camouflage is rendered mismatched and, in fact, becomes its own opposite. Like the polar bear, then, what the snowshoe hare is losing is its companion world. And just as we see ourselves in the polar bear, perhaps it is because we see ourselves in the case of the snowshoe hare too that makes it so compelling.

The snowshoe hare's camouflage mismatch is an example of what is termed **ecological** (or sometimes evolutionary) **anachronism**. This occurs where a trait adapted for one context is rendered maladaptive or mismatched in another. The snowshoe Hare is a case of ecological anachronism caused by climate breakdown. We might say that the hare is adapted for Holocene patterns of snowfall that no longer hold in the Anthropocene. The original discovery or documentation of ecological anachronism, however, concerns species for whom the Pleistocene epoch was their companion world. The Pleistocene is the geological epoch that lasted from roughly 2.58 million years ago until the beginning of the Holocene, 11,700 years ago. Ecological anachronisms, in other words, are first documented in relation to animals adapted to the Pleistocene and caught out of time in the Holocene.

The concept of ecological anachronism was introduced in the January 1982 issue of *Science* by Daniel Janzen and Paul Martin (Janzen and Martin, 1982). The concept had come to Janzen some years earlier in a moment of epiphany as he sat looking at a *Cassia Grandis* tree in Costa Rica. He noticed that a huge number of the tree's fruits were simply rotting on the ground underneath the shadow of the parent tree. Further, he noticed the enormous size and tough outer layer of the fruits and the fact that, when introduced, cattle would happily eat some portion of the tree's fruits. Janzen began to suspect that the tree and its fruits were evolutionarily adapted to produce fruits for mammals even larger than the cattle in both stature and number (Barlow, 2000). Janzen hypothesized, then, that the *Cassia Grandis* was genetically adapted for a Costa Rica full of megafauna that were now extinct. Janzen and Martin write, as a result, that the fruit and seeds of Costa Rican forest flora – their size, phenology and abundance – "can best be explained by viewing them as anachronisms" (1982, p.19). These fruits and seeds, they argue, "were moulded through evolutionary interactions with the Pleistocene Megafauna … and have not yet extensively responded to its absence" (Ibid, p.19). As Connie Barlow puts it "some fruits are adapted primarily for animals that have been extinct for thirteen thousand years" (2000, Ch.1). Plants that "some time in the past thirty or forty million years evolved fruits intended to attract very large mammals … not only remember the great mammals of the Pleistocene and before; they expect the gomphotheres, ground sloths, toxodons and their ilk to show up any day now" (Ibid). The issue for the plants is that "Thirteen thousand years is not enough time for plants to notice and genetically respond to the loss" (Ibid). The Cassia Grandis is by no means the only anachronism. Barlow demonstrates that a typical produce aisle at a supermarket is full of such anachronisms. Avocados and Papayas, for instance, are both adapted for extinct giants large enough to swallow them whole. They are suited for a world that no longer exists (Ibid). They are "lagging features" of the Pleistocene out of place in the Holocene (Ibid). What the Cassia Grandis has lost is its setting: its "companion world". The tree remains, one side of an evolutionary partnership.

The snowshoe hare, even perhaps the polar bear, demonstrate that this basic dynamic is being repeated today because of climate breakdown. We see ourselves in the polar bear. We are losing our companion world too. I suggest that, today, we are experiencing a new kind of ecological anachronism.

2.3 Second Nature

Humans, of course, existed at the transition from Pleistocene to Holocene. The Holocene, however, is the companion world of civilisation, of sedentary culture, of writing (Richerson and Boyd, 2000). Ecological anachronism as described by Janzen and Martin is, fundamentally, a genetic phenomenon. Over the course of the Holocene, there emerged “a repertoire of culture that rivals the genome in size”(Ibid p.2) . At the Holocene - Anthropocene transition, in other words, there is a second environmentally responsive system of information in circulation: culture. Richard Dawkins has, playing on this parallel, suggested the notion of memetics and memes as a sort of cultural equivalent to genetics and genes (Dawkins, 2006). Though there is undoubtedly some merit to this analogy, I follow Richerson and Boyd in believing it “best to wear the analogy between genes and memes most lightly” (2000, p.3). I don’t claim that culture, for example, follows strict Darwinian principles. The notion of memes is simply a useful shorthand for talking about units of culture.

Perhaps a more useful framework, and one that maintains this sense of a second system in parallel with genetics, is contained in the idea of second nature. The term ‘second nature’ has had a long and varied career in cultural theory and, throughout that career, has been freighted with all kinds of overlapping but distinct meanings. On the broadest level, though, one sees that the term points at two principal and related ideas. In the first, ‘second nature’ refers to the human construction of an artificial, cultural environment atop ‘first’ or primary nature. This could refer equally to the concrete built environment of a city or to the equally artificial, though intangible, environment of a language. Ralph Waldo Emerson famously articulates this latter case in his essay “The Poet”. Language, for Emerson, is “a second nature, grown out of the first” (Emerson, 2009 . This is the version of second nature that an editorial in the *Guardian* refers to with the statement that “Poetry has a big debt to nature” (The *Guardian*, 2024) because nature is the source of poetry’s metaphor. Second nature is a literary nature constructed over literal nature. Second nature in this sense extends beyond language to the environment of manners, norms, traditions and

ideas through which humans mediate their relationship with each other and with ‘first’ nature. In this first sense, primary nature is the nature of genes and genetics; second nature is the nature of memes and memetics.

The second principal meaning of the term second nature is connected to the first but means something much closer to the meaning the phrase carries in its colloquial usage. When something becomes second nature to someone, it has become so familiar, so habitual as to have been rendered common-sense, rendered totally natural. In an academic context, the idea in this second sense of second nature is that humans’ artificial environments - of norms, of language etc. - are so pervasively hyper-normalised and become so totally routine that they begin to confront the individual subject with the same immutable facticity as the laws of (first) nature. As such, cultural norms, traditions and ideas appear to the individual as kind of laws of a second nature. It begins to seem totally natural, to cite one example, that, in Northop Frye’s famous construction, the mythos of Summer is romance: this pairing ceases to feel constructed and takes on a sort of timeless, transparent quality (in Bloom, 1976). Second nature is a fabric knitted from timeless abstractions based on stable and predictable elements of primary Holocene nature. So it is, for instance, that, in the Western tradition, the Nightingale takes on the formulaic meaning of Spring (Ferber, 2017 p.135).

Emerson’s concept of language as “fossil poetry” captures both senses of second nature. As mentioned, Emerson sees language as a “second nature, grown out of the first, as a leaf out of a tree” (Emerson, 2009). In other words, first nature serves as a sort of ur-source domain for all of the images contained in language. Emerson’s argument is that all language first emerges as a “brilliant picture” of the world (Ibid). Language emerges, in other words, as a contingent, direct way of describing something concrete in the world. Over time, however, language, Emerson says, is abstracted. The original contingent link with the world fades and words seem to exist as semi-natural phenomena in their own right. The original brilliant pictures contained in words become fossilised in language. William Gordon writes that words “go flat with use” and, as a result, “Language is a vast repository of petrified metaphors” (1961, p.110). The contingency of language fades over time and language begins to confront the individual as a sort of fact of nature in its own right.

The images, metaphors and tropes of language constitute a second nature in the sense that they are derived from primary nature. At the same time, through routine use, the once brilliant pictures of language become second nature to us: they fade and fossilise into the background and become a sort of taken-for-granted common sense.

2.4 Climate Breakdown in our Second Nature

We are fascinated by the polar bear because we see in that species our own plight: we are losing our companion world. How, then, do we visualize this? What is the human equivalent of the snowshoe hare's camouflage mismatch? My proposal is that, to find the equivalent, we ought to look not at human genetics but, instead, to our second nature. Humans may not have been yet impacted by of ecological anachronism but it is possible to see the fact that we are becoming unmoored from our companion world through a parallel process in second nature, one I term eco*cultural* anachronism.

Jason Groves, writing about McKibben's concept of Eaarth, argues that its fundamental contribution is that it registers in "a defamiliarizing erratum" (2020, p.1), the sense in which the planet has become a kind of "ruptured reference" from the vantage point of culture (Ibid, p.10). What the term Eaarth captures is what Groves refers to as the "withdrawal of the familiarity of the Earth as a home, habitat, and stable point of reference" (Ibid). Writing about the literary trope of Autumn as described by Keats, Clark recognizes that "What was once a norm, the 'natural', emerges as a biological contingency that is becoming deeply problematic" (Clark, 2015, p.40). This idea of shifting reference points is at the core of ecocultural anachronism. Cormac McCarthy imagines something like ecocultural anachronism in his post-apocalyptic novel *The Road.* In that book, he imagines how sudden climatic change might produce something like an "idiom shorn of its referents" (McCarthy, 2006 p.88). In other words, he imagines not genetic lag but memetic lag. A piece of culture unmoored from its anchor point, its companion world, and adrift.

I am not suggesting that this dynamic of ecocultural anachronism has never occurred before the current era of climate breakdown. It has occurred even during the generally stable Holocene. The so-called Little Ice Age provides a good example of this. The Little Ice Age refers to a particularly cold climatic interval that took place during the Holocene throughout which winters in the Northern hemisphere were particularly cold and snowy[1]. The novelist Charles Dickens, born in 1812, grew up in England at the tail-end of this cold climatic interval. As such, many of the winters of his formative youth were significantly colder and snowier than longer-term Holocene averages[2]. Consequently, the Christmases portrayed in his work, most notably that portrayed in *A Christmas Carol,* are snowier and colder than would be the case even in the latter part of the nineteenth century and since. So popular and influential was Dickens' work that his portrayal of Christmas continues to form a core part of the western Christmas aesthetic. Zadie Smith, for instance, writing in an English context, says that "the dream of a White Christmas is … a collective Dickensian delusion" (Smith, 2014). Dickens' Christmas aesthetic has baked into it the conditions of the late Little Ice Age. As such, following the end of that interval, even before the onset of the Anthropocene, it was to some extent ecoculturally anachronistic. The key differences now, however, in the era of climate breakdown are scale and scope. Where the end of the Little Ice Age may produce some instances of ecocultural anachronism, climate breakdown does so on a much broader scale. Climate breakdown introduces fundamental and global disruptions in a way that was not true of the Little Ice Age.

2.5 Bisociation

Frames of reference are, then, at the very core of both ecological and ecocultural anachronism. An instance of either of these kinds of anachronism occurs where an entity – biological or cultural – straddles two frames of reference. Another way to phrase this is to say that ecological and ecocultural anachronism are produced when

[1] Jackson, S.T. and Rafferty, J.P. (2025) 'Little Ice Age', Encyclopedia Britannica, 14 August. Available at: https://www.britannica.com/science/Little-Ice-Age
[2] McVean, A. (2022) 'The Little Ice Age That Made Christmas White Forever', Office for Science and Society, McGill University, 23 December. Available at: https://www.mcgill.ca/oss/article/history-environment/little-ice-age-made-christmas-white-forever

an entity is seen to be bisociated between two climatic regimes. "Bisociation" is a term coined by Arthur Koestler to describe what he saw as the fundamental characteristic of human creativity and innovation (1962, p.35). Bisociation arises where a term, idea or situation is perceived of in two "self-consistent but habitually incompatible frames of reference" (Ibid). In this scenario, Koestler explains, the idea that is bisociated is made to "vibrate simultaneously on two different wavelengths" (Ibid). This bisociation produces a tension or even a paradox which - in a moment of creative insight - is resolved at a higher level of integration. When, for example, Isaac Newton observed the famous apple falling from the tree, he was bisociating. He saw the apple in two frames of reference at the same time: a quotidian frame in which ripe fruit falls from a tree and a novel cosmic frame in which large celestial bodies attract matter. By seeing the apple fall in both frames of reference at the same time, he was able to reintegrate the frames into the Newtonian model of gravitation (Geary, 2017). Instances of bisociation are, according to Koestler, the fundamental building blocks of human discovery. As Geary puts it, for Koestler, "the ability to simultaneously view a situation through multiple frames of reference is the source of all creative breakthroughs" (Geary, 2017). Geary points out that bisociation is key to the production of the 'Aha!' of scientific discovery, the 'Ah' of aesthetic insight and the 'Ha-Ha' of the punchline (Ibid).

William Beeman, for example, describes how virtually all humour is created when a communicator sets up a scenario in a given conventional frame of reference before suddenly reframing the scenario in a novel but logically coherent new frame in a way that causes the audience to reassess their original assumptions (1999). The humorous effect, then, is produced when the presented scenario is suddenly double framed, suddenly bisociated, in a surprising way. Beeman points out that the work of magicians is similar. In a magic trick, all the magician's actions are bisociated. They carry one meaning from the point of view of the audience but another covert meaning from the point of view of the magician. The audience exists in one context, following a single line of narrative until, suddenly, at the moment of the reveal, they are shown to be in another context entirely. At that moment, in an instant, all of the magician's previously innocent-seeming hand movements and patter takes on a more complex meaning. The audience's initial assumption are shown to have been unwarranted.

It was a flash of bisociation that first gave rise to the entire idea of ecological anachronism. Connie Barlow refers to this as “Dan Janzen’s epiphany in Costa Rica” (2000, Part 1). Janzen suddenly saw the fruits of the Cassia Grandis as bisociated. On the one hand, they were fruits he had, no doubt, seen many times before. In a flash, however, he saw them as the potential diet for megafauna long-extinct. Seen in this way, they suddenly became at once familiar and strange. On the one hand, they formed part of the Costa Rican flora familiar to Janzen. At the same time, they were suddenly part of a Pleistocene story that rendered them totally unfamiliar. The tree and its fruit are no longer simply part of the Costa Rican landscape but become portals to another world of extinct giants.

Rush’s example of Tupelo as password functions in the same way. She writes that the word grants her “entry into a previously unimaginable awareness” (2018, Part 1). Rush suddenly experiences the word as bisociated. It simultaneously, via its etymology, refers to the Tupelo tree’s adaptation to marshes and, at the same time, refers to the dead trees Rush sees which, she explains have been killed by overexposure to water. Rush uses the word to toggle back and forth between the two realities. It becomes, for her, a password or a portal. It is a way, then, thinking again in terms of the Uncanny, to toggle back and forth between the familiar and the strange.

2.6 Bisociation and Recognition

Instances of bisociation produce sudden moments of realisation. This is what Amitav Ghosh has in mind with his notion of ‘recognition’. Moments of recognition, for Ghosh, are moments of epiphany during which, in a flash, we experience “an instant change in our understanding of that which is beheld” (2016, Part 1). Ghosh considers recognition as key to overcoming the derangement he sees as the heart of the Western cultural attitude towards nature. He describes how climate breakdown leads to moments of recognition in which the conventional Western idea of nature as

inert is suddenly punctured by a novel understanding nature as emphatically alive and volatile.

Ghosh opens his book *The Great Derangement* by asking “Who can forget those moments when something that seems inanimate turns out to be vitally, even dangerously alive?” (2016, Part 1). Ghosh proceeds to provide examples of the kind of moment he means: “As, for example, when an arabesque in the pattern of a carpet is revealed to be a dog’s tail, which, if stepped upon, could lead to a nipped ankle” (Ibid). Ghosh goes on: a vine that turns out to be a snake, a floating log that is in fact a crocodile. In the first lines of his polemic, then, Ghosh spotlights this dynamic: what was taken for inert background suddenly springs to life (Ibid).

This same dynamic echoes in a series of rhyming episodes throughout the first section of the text. “It was a shock of this kind,” writes Ghosh, “that the makers of *The Empire Strikes Back* had in mind when they conceived of the scene in which Han Solo lands the Millennium Falcon on what he takes to be an asteroid – but only to discover that he has entered the gullet of a sleeping space monster” (Ibid). Ghosh’s richest example of this dynamic comes from his own family history. Ghosh’s ancestors lived in modern-day Bangladesh, on the banks of the Padma River. Ghosh writes that “one day in the mid-1850s the great river suddenly changed course, drowning the village” (Ibid). This was the catastrophe, writes Ghosh, that “unmoored” and “untethered” his forbears (Ibid). Ghosh imagines his ancestors awaking “to the recognition of a presence that has moulded their lives to the point where they had come to take it as much for granted as the air they breathed” (Ibid). Once again, what was backgrounded comes suddenly alive.

These are moments of recognition. Moreover, they are moments of bisociation. A log is bisociated with a crocodile, a vine with a snake, a dog’s tail with a rug’s pattern. Ghosh argues that the key to communicating climate breakdown – at least, as is his book’s focus, in the novel form – is to land upon these moments, upon this dynamic of recognition. In these moments, the Western derangement vis-à-vis nature is punctured. Nature goes from inert, taken-for-granted backdrop to living protagonist.

For Ghosh, this dynamic is so potent because it produces feeling of the Uncanny. Freud's notion of the Uncanny is notoriously difficult to define. Virtually all definitions, however, have at their core the basic idea that the uncanny has to do with the simultaneous co-existence of the familiar and the unfamiliar. The Uncanny, then, itself, is a product of bisociation. Something is Uncanny when it appears both alive and dead or as both strange and familiar. Many have pointed out that Freud's chosen term, unheimlich, perhaps translates more accurately to 'unhomely' rather than to 'uncanny' (Freud Museum London, 2019). Ideas of the Anthropocene or Eaarth amount, ultimately, to the rendering of our home planet precisely as unhomely. The climate of Eaarth or the Anthropocene is at once familiar and strange. Ghosh notes that "the word uncanny has begun to be used, with ever greater frequency, in relation to climate change" (2016, Part 1). Climate breakdown lends climatological and meteorological phenomena a new uncanny meaning. Ghosh quotes George Marshall who notes how, in the Anthropocene, weather becomes at once "extremely familiar and yet [has] now … a new menace and uncertainty" (Marshall in Ibid, 2016, Part 1). Ghosh also quotes Timothy Morton, changing their language slightly, in saying, "Isn't it the case, that the [unaccustomed] rain, the weird cyclone, the oil slick is something uncanny?" (Morton in Ibid, 2016 Part 1).

If the Holocene is the companion world of complex human cultures, then climate breakdown and the advent of the Anthropocene marks a sort of ur-bisociation, the emergence, on a grand scale, for the first time, of a new referential context for that culture. As the cultural valence or meaning of, for example, weather, or of the seasons, changes, the units of culture built up around those natural phenomena become, suddenly, bisociated. As in a case of ecological anachronism, they begin to lose their companion world. They are left, like the snowshoe sare, as a kind of lagging feature of an earlier world. They have encoded in them an old, taken-for-granted normative environment while at the same time, they appear in the context of a novel, unfamiliar environment. As such, they are useful as fulcrum points, as portals, joining together familiar and strange. They are ripe for producing flashes of recognition. They were established against a seemingly stable, timeless nature that has proven to be not timeless but contingent and temporary. Aspects of our cultures – metaphors, traditions, myths etc. – are like Ghosh's ancestral village. Just as the village was modulated along the seemingly stable contours of the Padma river, our

metaphors and so on establish cultural camp around seemingly timeless aspects of nature. When, because of climate breakdown, those aspects of nature shift and change, like Ghosh's village, the units of culture built atop them become unmoored.

Buse and Stott write that "The experience of the Uncanny might be summed up as that moment when the seemingly natural reveals itself to be cultural after all" (1999, p.19). So, for instance, to think again of Ghosh's example, the Death Star in *Star Wars* appears natural – an asteroid – but turns out to be cultural – a giant ship. This is the kind of jolt, or flash of recognition, produced by instances of ecocultural anachronism. Something that came to appear as second nature – the arrangement of Ghosh's ancestral village along the banks of the Padma river – is suddenly, in a jarring moment shown to be entirely cultural and contingent.

Cases of ecocultural anachronism are uncanny in precisely these ways. They reveal that what was once thought of as natural was always, in fact, contingent and cultural. Consider, again, Northrop Frye's notion that the mythos of summer is romance. This pairing of summer and romance has the feel in Western culture of something akin to a law of nature, a kind of second nature. As summer changes in the West, however, and a new Anthropocene cultural model of summer emerges (more on this later), that pairing becomes unmoored and is revealed to have been a contingent Holocene arrangement rather than something with any basis in nature.

In this unmooring, what was once thought of as natural - as second nature - is revealed to have been artificial and cultural. At the same time, the climatic conditions taken for granted in this idea are shown to be far from granted and, instead, highly contingent. Summer ceases to function as a stable reference point for this idea, as background. The idea is shorn of its referent and unbackgrounded. Like the snowshoe hare - which itself was shorn of its reference context and unbackgrounded - the idea comes to seem conspicuously out of time and unmoored.

In this respect, instances of ecocultural anachronism foster moments of Recognition, in Ghosh's sense. They function as passwords which grant us access to an old but forgotten awareness that the world is not to be taken for granted. We recognize that we had grown accustomed to a relatively stable Holocene world that, largely through our own actions, we have started to erode. Ghosh describes moments of

Recognition as moments in which “it dawns on us” the world is not a “stage for the enactment of human history” but is, instead, “a protagonist” (2016, Part 1).

2.7 The Pronghorn Blend

Bisociation, then, is the basic engine of the password dynamic I am interested in exploring in this project. If bisociation is the fundamental animating dynamic, then conceptual blending is the communicative mechanism by which those instances of bisociation are rendered legible and compelling in communicative contexts. This is a project about climate communication. It is of real relevance, then, to note that ecological anachronism makes an important appearance as a case study in one of the most influential works on human communication in recent decades. In their seminal *The Way We Think* (2002)*,* in which Gilles Fauconnier and Mark Turner provide the fullest account of their conceptual blending theory, the authors consider an article in the *New York Times.* The article in question is titled “Ghosts of Predators Past” (Fauconnier and Turner, 2002, p.115). The piece is about the American pronghorn and, specifically, why it appears to be so much faster than any of its predators. Scientists noticed that the pronghorn’s speed was dramatically overbuilt in a way that, at first glance made little sense. The excess speed is costly to the animal: the strong leg muscles require calorie dense food for their development. The speed made sense, however, once scientists saw it through the lens of ecological anachronism. The article says, “the pronghorn runs as fast as it does because it is being chased by ghosts - the ghosts of predators past” (The New York Times in Fauconnier and Turner, 2002, p.115). It continues, “even when predators have been gone for hundreds of thousands of years, their prey may not have forgotten them” (Fauconnier and Turner, 2002, p.115) . The pronghorn evolved, in other words, to flee from Pleistocene megafaunal predators who have since gone extinct. The pronghorn remains, however, and its speed is one half of a story: the other half is the missing American Cheetah on its tail. The *New York Times* article fills in this gap: it is illustrated by a photograph of a pronghorn in mid-stride with a pen-and-ink drawing of an extinct Cheetah chasing it.

Fauconnier and Turner are interested in this article because of the way in which it communicates its information. They point out that the article produces what they call a blend. Firstly, they show that there are, essentially, two pronghorn vignettes: the prehistoric one in which “the pronghorn barely outruns nasty predators” and the modern one in which it “easily outruns all its modern predators (2002, p.115). These two vignettes are blended together to produce a new hybrid story. This is signalled in various ways. For instance, marking out the predators as ‘ghosts’ signals that, as the authors put it, “they have no reference in the modern world” (Ibid, p.116). Similarly, depicting the pronghorn photographically but the predators in pen-and-ink suggests the idea that the pronghorn is modern and extant whereas the predators have to be added back in through artifice. Fauconnier and Turner are fascinated by the ways in which the enormous epochal shifts entailed in the end of the Pleistocene and the emergence of the Holocene, accompanied by the mass-extinction of the megafauna are compressed in this blend. The complex webs of cause and effect that led to the extinction of the predators and the survival of the prey (the pronghorn) are compressed down from hundreds of thousands of years into the lifetime of a single pronghorn. This compression is signalled by the mention of memory in the *New York Times* piece. The pronghorn runs fast because it is said to remember being chased by its old foes.

Fauconnier and Turner describe the blend in a memorable way: they write that it is as if the pronghorn runs quickly “Because it learned how when it was young and lived in a bad neighbourhood” (Ibid, p.118). In their vignette, now the animal is older and those old enemies are gone, the pronghorn hasn’t forgotten them: they still haunt the animal’s mind. The implications for this work lie in how all Pleistocene pronghorns and all Holocene pronghorns are compressed down into a single representative pronghorn as an icon of ecological anachronism. These two are then compressed again into a single animal in the blend. The key point that Fauconnier and Turner make with regard to these blends has to do with their truthfulness (or otherwise). They point out that they manage to be simultaneously false and true. They are false in the literal sense. There is no pronghorn who remembers being chased by a Pleistocene cheetah, there is no ghostly cheetah. However, if we accept that, it is possible to derive truth from the blend. In this instance, the truthful insight it produces is that the speed is an example of ecological anachronism. The blend

helps to access the insight that the pronghorn is so fast because that was once evolutionarily adaptive for it.

Ecological anachronism lends itself to being communicated through conceptual blends. The very basis or core of conceptual blends lies in Koestler's bisociation (1962, p.35). Fauconnier and Turner explicitly acknowledge Koestler's theory of bisociation as a forerunner to their conceptual blending theory. Conceptual blending theory is essentially an extension and formalization of Koestler's theory of creativity. Fauconnier and Turner focus not only on the bisociation but also, more so, on the reintegration or blending. In cases of ecological anachronism, the bisociation occurs naturally. The pronghorn, for example, is bisociated into a prehistoric pronghorn running from its rival predators and a modern pronghorn 'too' fast for its contemporary foes. Fauconnier and Turner refer to the two bisociated parts of the blend as the 'input spaces'. In cases of ecological anachronism, the input spaces are epochal - Pleistocene and Holocene. The blend - ghost predators chasing the pronghorn - allows a very complex story of environmental change to be compressed into a single, simple and memorable image.

It is worth noting that there are, of course, other theoretical frameworks in the field of communication that I might have used to arrive at some of the insights in this work. Semiotics is perhaps the most widely known of these. A semiotic analysis of a text like Keats' poem 'To Autumn' would certainly be capable of bringing out the difference between the literally denoted Autumn of the poem and the broader cultural connotations about the season of Autumn implicit in the poem. The parallel idea in conceptual blending is that of 'compressions' in which cultural information about a phenomenon is said to be compressed into a cultural model of that phenomenon. Conceptual blending however, is more useful to me as a theoretical framework for this project than, for example, semiotics would be because of the ways in which conceptual blending provides a framework for understanding novel, improvised, ad hoc and emergent creative meaning. While semiotics is primarily concerned with the production of conventional meanings, conceptual blending can move beyond these conventions to an account of more creative and novel forms of meaning.

This idea of using conceptual blends to communicate cases of ecological anachronism is not unique to the pronghorn blend. Writers refer to the snowshoe hare using conceptual blending too. They write as though the animal has forgotten to change into its winter wardrobe. The hares are constructed as making “a lethal fashion statement” (Harball, 2013) or a “fashion faux pas” (Evans Ogden, 2014). Where, then, there is a single pronghorn who remembers growing up in a bad neighbourhood and so hasn’t stopped running from vanished predators, so too is there a single snowshoe hare who has forgotten to change its wardrobe for spring and is embarrassingly caught out in the wrong clothes. This note of embarrassment is a common feature of the researchers’ discourse around the hares. One researcher describes observing the mismatched hares: he says, “they really think they’re camouflaged … They act like we can’t see them. And it’s pretty embarrassing for the hare” (in Tabora-Roberts, 2013). This description implies a Holocene-Anthropocene blend. The hare is constructed as not having yet realized that seasonal timing has shifted. Of course, there is no such realization possible because this is a story not of awareness but of adaptation.

2.8 The Structure of the Blend

It is possible to diagram such blends - Fauconnier and Turner offer a sort of template for doing so in their *The Way We Think.* There are always at least two ‘input spaces’. In the case, for instance, of the pronghorn blend, the two input spaces are a Pleistocene input space in which the pronghorn runs fast to evade its predators and a Holocene input space in which the animal runs as fast despite not having any predators. Sitting behind these input spaces is another that is referred to as a ‘generic space’ which contains that which is common to both inputs - in this case the generic space might contain something like a prey animal running at extreme speed to evade predators. The two input spaces then selectively project certain elements into a fourth blended space. In the case of the pronghorn blend, the predators from the Pleistocene space are projected into the blend but as ghosts. The pronghorn from the Holocene blend, meanwhile, fleeing from ghosts, is projected. Diagrammed, the Pronghorn blend might look like this:

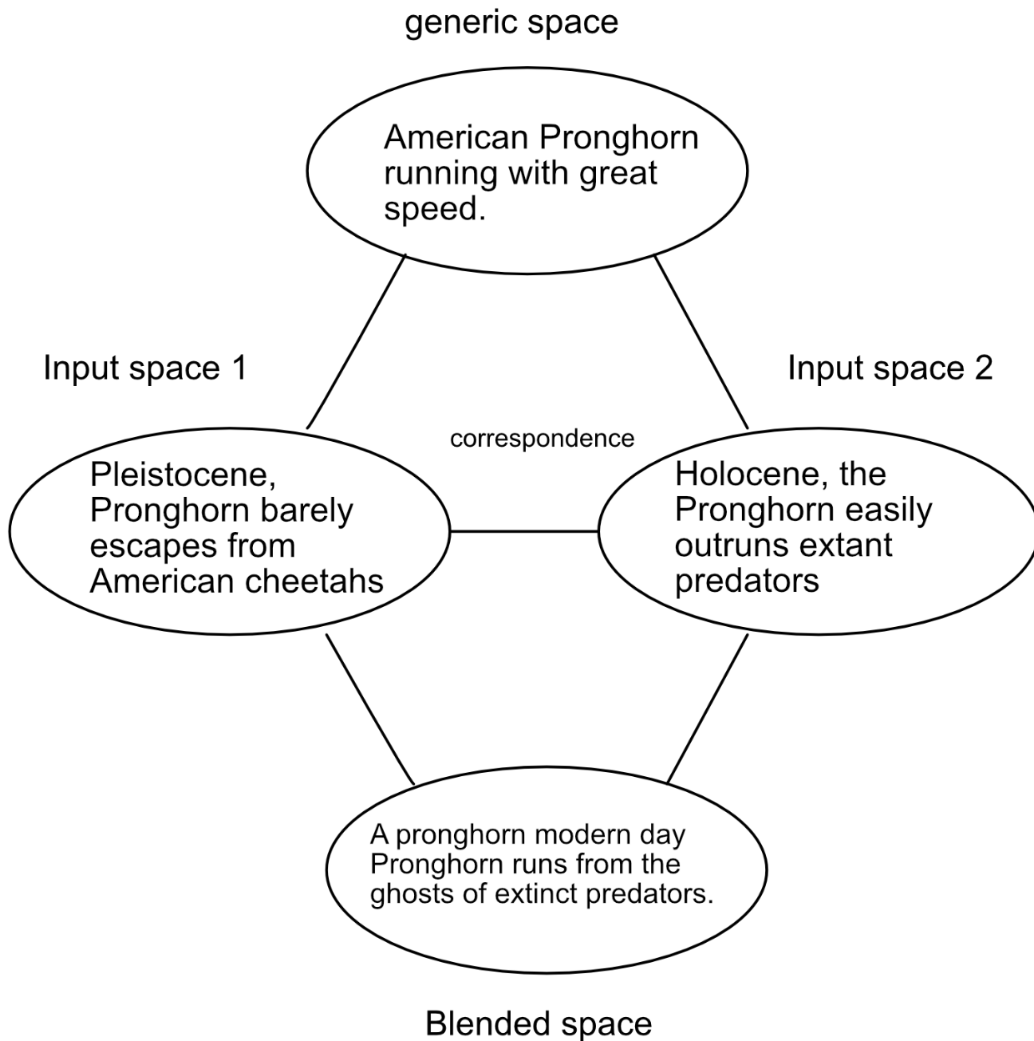

Figure 1: diagram of the pronghorn blend. I have borrowed the diagram layout from Fauconnier and Turner (2002) who use versions of this diagram to describe several examples. I use several instances of this type of diagram throughout this project.

The case of the snowshoe hare can be diagrammed in the same way:

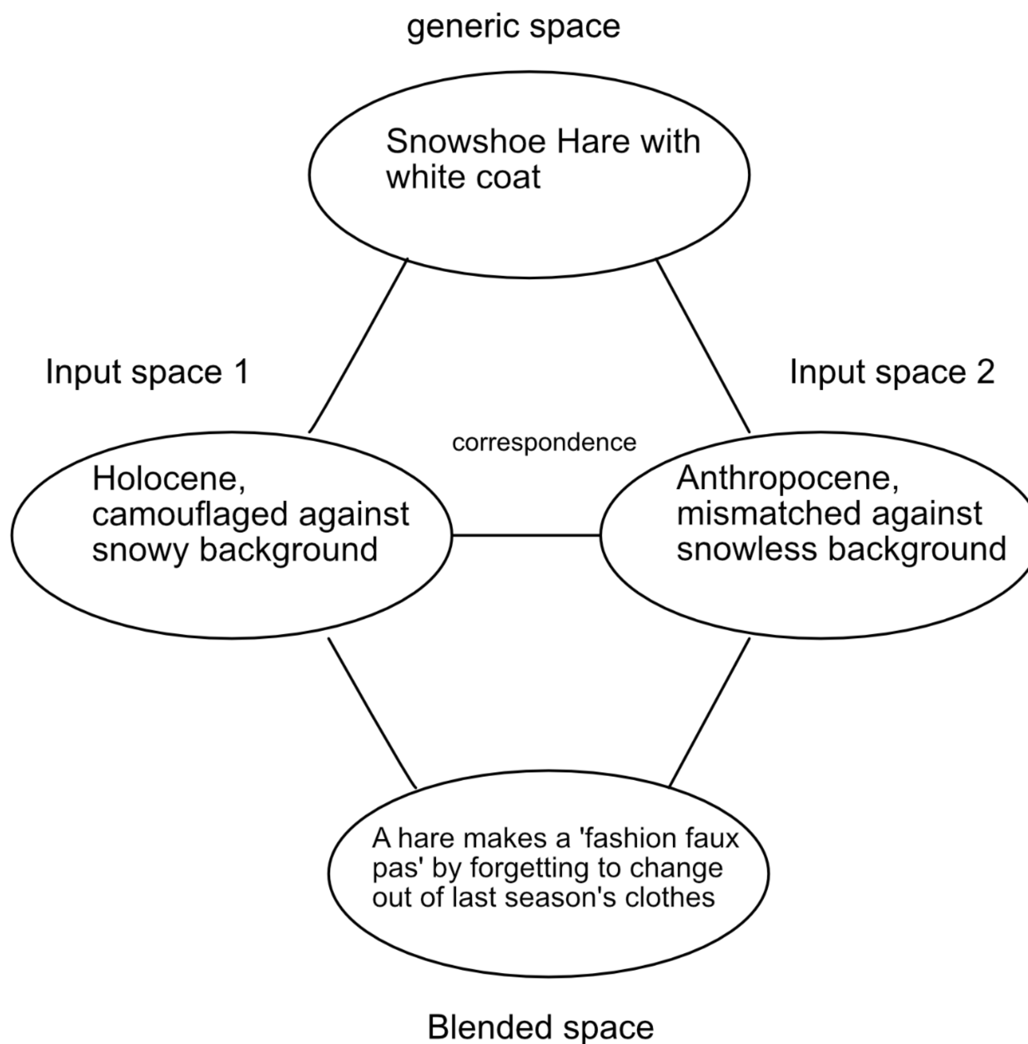

Figure 2: Snowshoe Hare as conceptual blend

It is worth, at this point, reiterating a key point about conceptual blending theory. That is that the blends produced are often (almost always) at once rational and irrational. The chase suggested by the pronghorn blend or the fashion faux pas of the snowshoe hare blend are both, of course, fantasies, they never actually occurred. Nonetheless, they harbour a deeper rationality: they produce real, valid information about the world. By modelling these situations as a ghost-chase or as a fashion faux pas, the complexity involved is - as Fauconnier and Turner put it - “compressed to human scale” (2002, p.114) for us. We are granted a moment of global insight into the phenomenon at hand. The chase or the fashion faux pas are

‘as if’ scenarios that, though fictional, produce real-world information. In conceptual blending theory, this property of blends is said to come from a process of “running the blend” (2002): treating the blend as a sort of simulation and running it in order to understand what kind of model of the world it produces. .

2.9 Ghosts

Fauconnier and Turner describe how the *New York Times* communicates the ecological anachronism of the pronghorn’s peed via a blend that takes the form of a ghost story. This spectral theme reoccurs frequently with regard to ecological anachronism. Connie Barlow’s book on the subject of ecological anachronism is titled *The Ghosts of Evolution.* Barlow demonstrates how this element of spectrality emerges at the very moment of the discovery of such anachronisms. She quotes from correspondence between Janzen and Martin. Janzen writes to Martin about his observations of a *Cassia Grandis* tree in Costa Rica. He notices how the tree produces masses of fruit which ripen, fall from the tree and rot on the ground underneath the parent tree. He further notes that, when they are introduced into the same field as the tree, cattle happily consume some of the fruits but by no means al (Barlow, 2000, Ch.1). He suspects, therefore, that the fruiting may be an anachronism left over from the Pleistocene. He suspects that the tree evolved in a context featuring many more large mammals who would once have fed on its abundant fruit crops. Martin, tasked with shortlisting some candidate megafauna who might complete this picture, responds to Janzen by saying “I’ll invoke the ghosts of some hungry extinct herbivores and you will see if they eat up the fallen fruit” (In Ibid). Barlow notes how “Right at the outset Martin spoke of the Pleistocene megafauna as ghosts” (Ibid). Martin, in particular, maintained this framing. He wrote that “We live on a continent of ghosts, their prehistoric presence hinted at by sweet-tasting pods of mesquite, honey locust, and monkey ear” (Ibid). From the outset, ecological anachronisms are framed and communicated as hauntings.

Key to the development of the notion of ecocultural anachronism in this project was the observation of parallel cultural ghost stories following the same basic template of, for instance, the pronghorn. Consider an anecdote recounted by Robert MacFarlane

in *Underland.* In that book, he recalls stories of “how small craft hugging the Greenland coastline will sometimes find their GPS navigation devices screaming alarm, warning of collision” (Macfarlane, 2019, Part 3, Ch.10). There is, however, no collision imminent. The reason for this is that “The coordinates of the former extent of glaciers have been inputted into the mapping, but the retreat rate has been so fast that they are sailing into and through the digital phantom left behind by the ice” (Ibid). Elsewhere he writes about “ghost ice” (Ibid). Once again, here, we encounter the spectral. The map is caught out of time - haunted by the anachronism of the vanished glacier.

MacFarlane’s anecdote essentially replicates the dynamics inherent in the pronghorn blend. As in the pronghorn blend, there are two input spaces: an earlier one (for ease we might refer to this as the Holocene space) and a later one (which we might think of as the Anthropocene space). In the Holocene space, the satellite map accords with the territory. In the Anthropocene space, however, the map remains as it was but the territory itself has shifted. As a consequence, like the pronghorn’s speed, the map is best understood as an anachronism. There is also in MacFarlane’s anecdote a blended space in which the boat sails through the ghosts of the former glaciers. The parallels between MacFarlane’s anecdote and the pronghorn blend are, I think, quite clear. Here, again, a spectral conceptual blend is used to connect a before and an after time. Complicated stories of cause and effect, long durations of time are compressed into a single image: a ship sailing towards collision with a ghost glacier.

Turning, for a moment, from climate breakdown to the related Anthropocene crisis of biodiversity loss, we find another example in Franklin Ginn and Helen Whale’s essay “In the Absence of Sparrows”. Whale and Ginn consider the term – the meme – ‘Cockney Sparrow’. This is a colloquial term of endearment for Cockney people. It emerges from the fact that, historically, Sparrows were ubiquitous in central London – one interviewee recalls they were “just always there, always chirruping away in the background” (2017, p.108). Since the late 1970s, however, as part of a wider biodiversity collapse, sparrow populations in urban Britain have fallen to “near-extinction” levels (Ibid). As a consequence, Whale and Ginn point out, the term ‘Cockney Sparrow’ “will be released from any visible ecological mooring, left to free-

float mysteriously" (Ibid, p.111). The term, then, will soon become a case of ecocultural anachronism, a lagging feature of an earlier reality. As with the other examples, Whale and Ginn conceive of this in explicitly spectral terms. They write that the "sparrow will linger as a ghostly linguistic presence" in the area even after the real sparrows are gone (Ibid). This, again, is a conceptual blend. The idea here is that the sparrows will haunt the local culture even after they have been shorn of their real world referent.

I discuss this spectral theme again in the next chapter on methods. It is of significance, however, because it corroborates the basic notion of a cultural equivalent to ecological anachronism. The example of the ghost story suggests that in both ecological and ecocultural contexts, climate change produces bisociation which can be communicated via conceptual blends. The ghost story, again, is just one kind of conceptual blend. Nonetheless, it points to the existence of a cultural analogue to ecological anachronism. Moreover, it points to the fact that instances of this ecocultural anachronism, like with its ecological cousin, because they are based on an essential bisociation, seem intuitively to fit into conceptual blends.

2.10 Unmooring

It is worth noting, in discussions around the nature/society relationship in the era of climate breakdown, the frequency with which the maritime metaphor of unmooring appears. Whale and Ginn write about the term Cockney sparrow being "released" from its "ecological mooring" (Whale and Ginn, 2017). Ghosh describes the sudden Padma flood as the "catastrophe that had unmoored [his] forbears" and the "elemental force that untethered [his] ancestors from their homeland" (Ghosh, 2016). In his essay "Marshland Elegy", Aldo Leopold describes how Marshland is the companion world of the Crane. "Their annual return", he writes, "is the ticking of the geological clock" (Leopold, 1949). The disappearance of the Crane from the marshland results, then, in casting the marshlands "adrift in history" (Ibid). On a larger scale, Casper Bendixsen, Trevor Durbin and Jakob Hanschu write that "The Anthropocene is most radically experienced as an unmooring of the human condition from the relatively predictable and stable 11,000 year period since the last major ice age" (2020 p.164). This idea of unmooring is a central one in this work. Once a unit of culture has been unmoored from its natural anchor point it is left, as per Whale and Ginn's language, to

‘free float mysteriously’. Pursuing this metaphor of ‘free float’, it is tempting to think of this dynamic in terms of the concept in semiotics referred to as the ’floating signifier’.

A floating signifier is a signifier – a word, image or some other sign that is not tightly connected with a particular signified. It is a signifier, in other words, that can mean different things to different people[3]. In the instances of unmooring under discussion in this work, the relationship between a particular signified and signifier is distorted as the signified is transformed or disrupted by climate breakdown. As the signified – signifier relationship is loosened – as one is unmoored from the other – the signifier can then be anchored to new signifieds, to new kinds of meaning. So, for example, the name of Glacier National Park, as the park’s glaciers melt and disappear, is in a sense unmoored from its signified – the park and its glaciers. At the same time, thus unmoored, it can be anchored in new ways so as to take on new meanings. Glacier National Park goes from the simple name of a place to becoming an emblem of climate breakdown and its rapid and dramatic effects. The unmooring, in other words, by rendering terms like this into floating signifiers produces in them a sort of emergent polysemy.

2.11 Conclusion

This project operates through a framework that might be thought of as a series of nested dualities. At the core is the idea that climate breakdown represents a sort of ur-bisociation of the world. As such, ideas such as the Holocene-Anthropocene or Earth-Eaarth divide emerge. What these ideas point to is the basic idea that we stand on the cusp of losing our companion world, the world taken for granted by our cultures, the world we know as our backdrop. As such, we are, with respect to our second nature rather than our genetics, in a position analogous to that experienced by the snowshoe hare. Our ways of living are becoming unbackgrounded. This great unbackgrounding produces all kinds of dualities, all kinds of bisociation as elements of our culture become trapped between two worlds. These elements of culture thus become double framed in a way that allows us to use them, akin to Rush and her password, to produce conceptual blends and, thereby, gain a compressed, human-scale, global insight of the complex phenomenon that is climate breakdown.

[3] Beautiful Trouble. (n.d.) ‘Floating Signifier’, *Beautiful Trouble Toolbox*. Available at: https://beautifultrouble.org/toolbox/tool/floating-signifier

Chapter 3 Trajectory of Research, Research Design and Methods

3.1 Introduction

This research began as an investigation into novel forms of climate communication. Specifically, I began by analysing the signs and placards of the *Fridays for Future* protest movement. I did this because I had noticed that they had gained significant media attention. There were many 'listicle' style articles published listing the best or funniest signs (e.g. The Guardian, 2019; Barr, 2019). Protest signs are, by their very nature, compressed. They need to say a lot with great economy. I was particularly interested in the kinds of metaphors used in the signs for climate breakdown. I was interested in these because I realised that they functioned as mini-models for climate breakdown.

As I researched these metaphors, however, I noticed another kind of compression on the signs that had not yet been identified in the literature. The first and clearest instance of this that I noticed was a sign based on the RMS *Titanic* (a case I discuss in more detail in chapter 4 of this work). There were several examples of this sign, but all of them had a basic structure in common. In essence, they imagined a modern-day *Titanic* encountering 'no problem', no iceberg. They would state something like 'the Titanic would have no problem today'. The implication being, of course, that the iceberg, or icebergs in general, had melted due to climate breakdown. I include an example of these signs here as illustration, though a large number of versions and variations of it exist.

4

Figure 3 An example of the Titanic sign from Milan

I found myself returning time and again to the *Titanic* signs in particular. I was interested in them because I felt that, at their core, they were doing something communicatively complex and interesting. Ultimately, these signs were removing the central disaster from the quintessential disaster story of the twentieth century and yet, somehow, telling a story not of disaster averted but of even greater catastrophe. Guided in part by curiosity but also by the belief that underlying these signs was a valuable communicative insight, I sought to unwrap this essential paradox. This investigation became an essentially literary pursuit in which my goal was to

[4] Mænsard vokser, 2021. Students marching in Milan for the pre-COP26 at Fridays for Future rally. The sign in the middle says "The Titanic would have no problem in 2021". [photograph] 1 October. Available at: https://commons.wikimedia.org/wiki/File:Titanic_in_2021_-_Fridays_for_Future_pre-COP26_Milano,_Lombardy,_Italy_-_2021-10-01.jpg

understand what it was about the *Titanic* story and its cultural meaning that meant its facts could be reversed even as its essential meaning was preserved. This literary investigation led me to the understanding that the *Titanic* story is taken on a broad level as a story about fate and balance. The story, as I will describe in more detail in Chapter 4 taps into very deep cultural mythologies about shipwreck. In essence, this understanding of shipwreck suggests that seafaring might be understood as a fundamentally hubristic human pursuit in which that which is understood to have been sundered by God - i.e. distant lands by the sea - are rejoined by avaricious humans in pursuit of expansion and acquisition. In this model of seafaring, shipwreck, though locally disastrous, can be understood as a moment of recalibration, a moment in which things are restored to the way in which they ought to be. The *Titanic* story is certainly understood, culturally, in terms that echo these - the central disaster is one that is fated to happen. Moreover, when it does happen, it is interpreted, even at the time, as a sort of just answer to human hubris, a restoration of order.

In this context, the *Titanic* signs make sense in a new way: they are essentially about the breakdown of fate or the breakdown of balance as a result of climate change. The signs, in essence, bemoan a fated appointment between ship and iceberg, culture and nature, missed. As I was conducting this inquiry, I was reading Cunsolo and Landman's book of essays *Mourning Nature.* It was in that book, and in particular, in Helen Whale and Franklin Ginn's essay "In the Absence of Sparrows", that I encountered the term "companion world" (2017). This term, I realized, succinctly captured precisely what I had been trying to articulate with reference to the *Titanic* signs. What the *Titanic* signs are positing is that the *Titanic* story has lost, is losing or will soon lose its companion world. In that essay, Whale and Ginn also provide another instance of a part of culture losing its companion world. I mentioned this example in the previous chapter. In broad strokes, Whale and Ginn argue that the term 'Cockney Sparrow' is coming unmoored from its 'companion world' as biodiversity loss decimates London's sparrow population (Ibid). I became interested at this point in this core idea of a unit of culture, unmoored from its companion world, coming to encapsulate in a potent and compressed way the uncanny changes wrought by climate breakdown.

At this point, I was reading Elizabeth Rush's book on rising seas levels, *Rising*, in which she develops her notion of tupelo as password (2018, Part 1). This is a concept I have already introduced and will discuss again in this project. Suffice to say here, then, that Rush sees the term tupelo as a valuable totem with which to trigger an awareness of climate breakdown and its uncanny effects. The term works in this way for Rush precisely because it has come unmoored from its companion world. At this point in my research, then, I was developing a fundamental concept that would come to form a major part of the contribution of the project. In short, this concept could be described as constituting the idea that parts of culture, once unmoored from their companion worlds as a result of climate change, come to function as passwords or portals through which to access an awareness, vision and understanding of the scale of the changes underway. In effect, I was drawing a pattern between similar cases of such cultural mismatch.

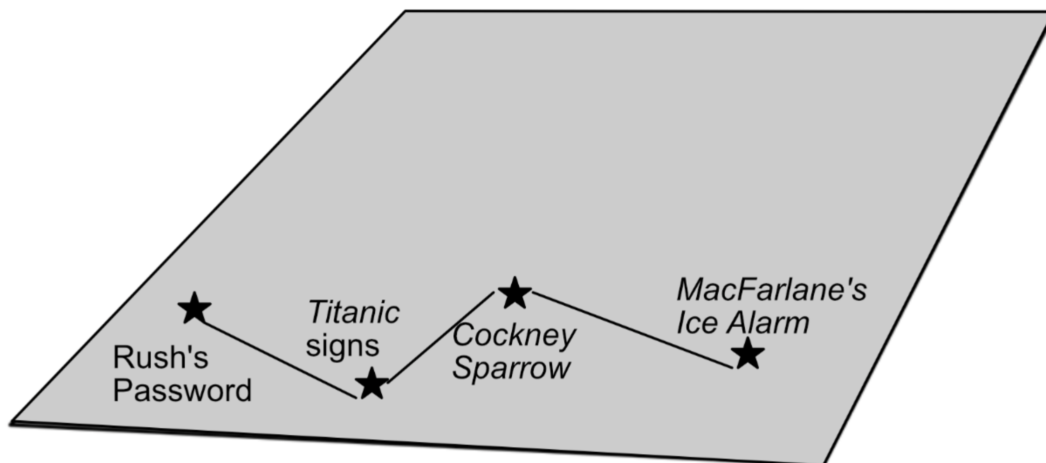

Figure 4 I began to associate similar cases of cultural mismatch

I have already introduced the idea of bisociation that is fundamental to the examples in this research. The research itself, however, also enacts bisociation in that it was in a moment of bisociation that the other major strand of the contribution this research makes came into focus. In this chapter up to now, I have described a process of association: I see Whale and Ginn's ideas around the Cockney Sparrow repeated in the case of the *Titanic* and then echoed again in Rush's idea of passwords. By

associating these ideas, I begin to map out a concept. These are all different ideas but they are fundamentally related in that they are all about lags between nature and culture produced as a product of climate change. It is at this point in the research that I introduced an idea from another plane. In further secondary research around the notions of companion world and shifting backdrops, I encountered the case of the snowshoe hare. Once again, this is a case that I explore in detail and reference a number of times in this project. As such, I will refrain from providing the full detail again here. In essence, the case of the snowshoe hare relates to the core idea of habitat mismatch. The animal, native to the boreal forests, is evolved to have a brown coat in summer and a white coat in winter such that its moulting patterns align with patterns of seasonal snowfall. The result, historically, has been that the hare is camouflaged against the summer's muddy forest floor and the winter's snowy landscape (Mills et al., 2013). Climate breakdown, however, is scrambling those patterns of snowfall (Ibid). As a consequence, the hare, in recent years, is often found wearing its white coat before any snow has fallen or after most of the snow has melted. What evolved as camouflage comes to serve the precise opposite function.

Reading accounts of the hare, I immediately saw parallels between it and the other cases I have described. In effect, the hare is coming unmoored from its companion world. As a result of this unmooring, the hare functions as a kind of password or portal through which to observe the scale and nature of the changes underway. There is, however, of course, a fundamental difference between the case of the hare and the other examples discussed. The hare's case has to do not with culture but with genetics and evolution. As such, it belongs to a different category, it exists on a different plane.

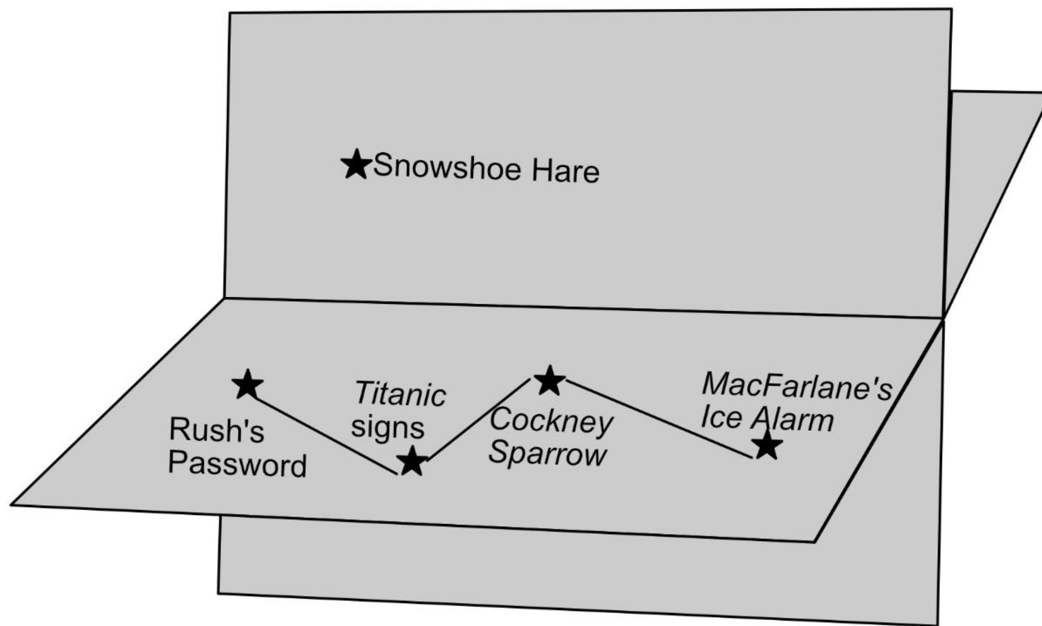

Figure 5 I introduce an idea from another plane

Some further research led me to the understanding that the plight of the snowshoe hare is the latest chapter in a long-standing story. The case of the hare is an example of ecological anachronism. Through some further reading on ecological anachronism, I discovered that, ordinarily, it is thought of as a phenomenon produced by the changeover from Pleistocene to Holocene. Connie Barlow, for example, in her *The Ghosts of Evolution,* evocatively describes how we find ourselves surrounded by hangovers left over from a much tougher, harsher climatic regime (2000). These are haunted by ghosts of creatures from a previous age. Moreover, we can use these anachronisms - the giant stone of an Avocado, the prodigious speed of a Pronghorn, to glimpse both the ghostly monsters now vanished and the scale of the change between that world and our own. In other words, ecological anachronism is the study of creatures cast out from their companion world by a kind of climate change.

These two planes intersected in my mind. The product of this intersection was, itself, a conceptual blend, one that might be diagrammed like this:

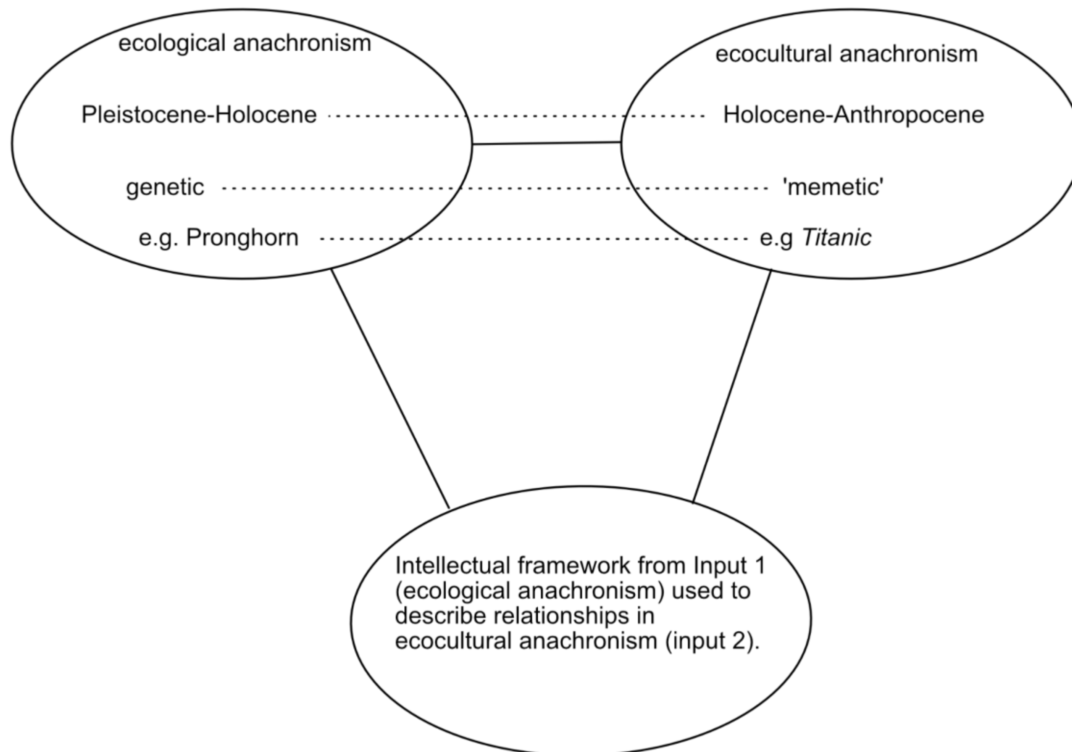

Figure 6 The blend that forms the core of the analogy in this project

In other words, I realised that, by understanding these cultural unmoorings and anachronisms in the terms of the established field of ecological anachronisms, I could essentially import and transpose aspects of an intellectual framework from the more established space to the other newer space. I could think in terms of ecocultural anachronism.

At this point in the research, then, I had outlined the core tenets of the work. Instances of ecological or ecocultural anachronism can be made to function as passwords or portals for climate communication. Moreover, by analogy, understanding ecological anachronism might help me develop a more nuanced understanding of ecocultural anachronism.

3.2 Analogical Research: Developing the Core Analogy

As such, at the highest level, the methodology involved in this research is one of analogy. In this project, I conceive of analogy in terms very similar to those laid out by Diane Vaughan. Vaughan describes her work in which she theorizes by means of analogy. She writes that she "was creating explanations by drawing in theories and concepts developed to explain similar events or activities in social settings different from [her own]" (2014). Vaughan defines the use of analogy in a research context as "the cognitive process of structural alignment and mapping between separate, distinctive domains and their parts" (Ibid). Vaughan describes the moment at which she realized that her dissertation functioned by means of a central analogy. In what she terms "a flash of recognition", she saw that she had taken Robert Merton's sociological theory of individual deviance and applied it to organizational deviance instead (Ibid). She writes, "I realized I had switched units of analysis, using Merton's societal-level theory, which was designed to explain rates of individual deviance, and instead applying it to organizations" (Ibid). This switch, this analogy, was a productive one. Vaughan was alerted to the central analogy when reviewing her work and noticing the phrase "legitimate means" in it in relation to organizations (Ibid). This phrase "legitimate means" is a key phrase in Merton's work. Vaughan essentially realizes upon reviewing her work that the phrase has become bisociated for her. On the one hand it retains its original sense and connotations as deployed by Merton. At the same time, Vaughan reads in it a second sense in relation not to individuals but to organizations. As Vaughan puts it:

> "I discovered myself writing a sentence about organization characteristics as "legitimate means" to accomplish deviance. From the toolkit of concepts I carried around with me all the time, without thinking I had extracted one concept—legitimate means—from Merton's Social Structure and Anomie theory (1968[1938]) because it resonated with my data" (Ibid).

This kind of bisociation is the heart of Vaughan's analogy. By seeing her subject matter - organisations - through Merton's theories of individual deviance, she was

able to port across an entire theoretical framework with which to consider organisations.

In this research, I have experienced very similar moments of bisociation. In Janzen and Martin's seminal paper on ecological anachronism, for instance, they write of the fruiting behaviours of the *Cassia Grandis* tree that they are "best explained by viewing them as anachronisms" (1982). I saw instantly that this phrase could just as easily apply to Elizabeth Rush's description of the term tupelo. These kinds of linguistic phenomena are, likewise, 'best explained by viewing them as anachronisms'. Similarly, Whale and Ginn, as mentioned, coin the term 'companion world' in the context of a discussion on biodiversity loss. They describe how the loss of a species entails the loss of a whole world of association and connotation. So, for example, the loss of the passenger pigeon is not only the loss of a species but also the loss of an entire cultural-historical imaginary, loss of a whole context (2017). Once again, I immediately felt this phrase to be bisociated. Just as the loss of the passenger pigeon is simultaneously the loss of its companion world, so too, I saw, is the disintegration of , for example, the metaphor 'glacial pace' tied up with the disintegration of the phrase's Holocene companion world.

The same phenomenon of bisociation occurred also coming, so to speak, from the other direction. For example, when Cormac McCarthy imagines, in the post-apocalyptic setting of *The Road,* an idiom "shorn of its referents" or "The names of things slowly following those things into oblivion" (2006), I could immediately see in these ideas the outlines of the pronghorn and its prodigious speed. The pronghorn's speed is "shorn of its referents" that is, precisely, what makes it noteworthy and anachronistic.

It is worth, then, at this point, drawing out the basic correspondences of the core analogy:

Table 1 Ecological vs Ecocultural Anachronism

Ecological Anachronism	**Ecocultural Anachronism**
A matter of genetics	A matter of 'memetics'
Primarily a result of the Holocene - Pleistocene changeover	Primarily a result of the Holocene - Anthropocene changeover
A phenomenon of nature	A phenomenon of 'second nature'

This project, then, is, in a sense, an exploration and development of this essential analogy. Building out this analogy is the project's overall strategy. Various elements of this endeavour are then achieved through deploying specific tactics. Each of these tactics carries with it its own methods.

Dedre Gentner points out that in analogical research, the researcher uses the base (the analogue) to understand some aspect of the target. Once the analogy has been discovered, the work involved then consists in mapping from base to target and, finally, in evaluating the inferences arrived at via these mappings (Genter, 2025). In effect, then, this research project can be understood in terms of a series of mappings from ecological to ecocultural anachronism along a series of parameters and the evaluation of those mappings and the level to which they produce valuable inferences.

In effect, the research plays out through four main mappings of this kind. (i) I use the analogue of ecological anachronism and the research carried out around finding examples of it to understand how to go about finding examples of ecocultural anachronism. (ii) By drawing on the ways in which scholars have analysed and unpacked instances of ecological anachronism, I am given a model to do the same with relation to ecocultural anachronism. (iii) Understanding how instances of ecological anachronism are communicated allows me to understand how instances of ecocultural anachronism might be communicated and, as such, function as passwords. (iv) As I will detail, holding the analogy in mind allows me to make the

serendipitous discovery of new Anthropocene metaphors that may not have been visible to me outside the context of this core analogy. In the following sections, I consider these mappings in turn. In each case, I describe how the central analogy provides me with a toolkit of methods with which to approach the central topic. At the same time, in some instances, these tools must be augmented with the addition of other research methods.

3.3 Finding Instances of Ecocultural Anachronism

In Chapter 6, I consider how to go about finding examples of ecocultural anachronism. In order to think about how to go about this, I consider the core analogy. How, historically, have instances of ecological anachronism been found? Connie Barlow describes how John Byers who, quite literally, wrote the book on the anachronism of the pronghorn's speed, developed a heuristic for finding instances of ecological anachronism. Byers demonstrated that, wherever a species appears "overbuilt" there is something that "deserves scrutiny" (2000, Part 1). His essential point is that either in scale or in terms of their defences, many 'anachronistic' species are adapted to the much rougher, larger, tougher world of the Pleistocene than to the relatively moderate Holocene. As such, the quality of being overbuilt in size or in brawn suggests the possibility of an anachronistic adaptation to the Pleistocene. Peter Del Tredici, a botanist, proposes a similar heuristic. He suggests that wherever a species or trait appears "overcommitted in one direction", there is likely to be a case of anachronism (in Barlow, 2000, Footnote 11).

By analogy, these heuristics ought to point in enlightening directions for ecocultural anachronism. Once again, I immediately read Del Tredici's line - that anachronisms are often "overcommitted in one direction" - as bisociated. Consider, for instance, the Begich, Boggs visitor centre at the Portage Glacier, near Anchorage, in Alaska. This is a case I consider again later in this project, in Chapter 6. Suffice to say here that the centre was constructed in the 1980s with an observation deck facing the glacier. In the intervening time, the glacier has receded out of view of the deck such that it is no longer visible from it. The result is the uncanny situation of a glacier observation

deck with no glacier to look at. The observation deck is, then, in a literal sense, 'overcommitted in one direction'. The centre and its staff are, as a result, working to diversify away from this overcommitment. The forest service is working to "change the facility's focus"[5]. Byers' idea is that, in the cases of ecocultural anachronism, the overcommitment is in the direction of toughness or scale. At the threshold of Holocene and Anthropocene, however, the nature of the overcommitment is in other directions. In Chapter 6, I consider the ways in which the Anthropocene differs from the Holocene in order to think about where and how aspects of culture might be overcommitted to disappearing Holocene realities. Through this comparative analysis, I develop a series of three heuristics for finding examples of ecocultural anachronism.

3.4 Analysing Instances of Ecocultural Anachronism

After finding instances of ecocultural anachronism, it is important then to be able to analyse them effectively. Once again, here, I turn to the core analogy in this project in order to be able to do this. Ecological anachronism is such a compelling idea precisely because of the way in which it transforms an everyday object into a portal to another world. Connie Barlow, for instance, describes how, from an Avocado, a whole world, full of creatures large enough to swallow Avocado stones whole, can be constructed. An everyday encounter in a grocery aisle, seen through the right lens results in a powerful moment of imagined worldbuilding. That process of construction or extrapolation from a single entity to an entire world is conducted via biological research and informed speculation. Barlow writes that "Evolutionary ghost stories are necessarily speculative" but that, at the same time, at their core "is the sound contention that when structures or behaviours are puzzling, one should look for adaptive behaviours in the past" (2000, Part 1). As such, Barlow says, "provisioned with the crucial scientific understanding and a bit of imagination" it is possible to see anachronisms in all sorts of places (Ibid).

[5] Rosen, Y. (2007) 'A melting Alaska draws visitors', *The Christian Science Monitor*, 14 November. Available at: https://www.csmonitor.com/2007/1114/p03s02-usgn.html (Accessed: 9 May 2025).

The idea, then, is that latent within an avocado's stone or an American pronghorn's speed is an entire companion world which can be drawn out with a combination of the right specialist knowledge and some imagination. Seeing the avocado or the pronghorn in their original contexts and then, at the same time, in the contemporary world renders them bisociated and, as such, they are transformed into portals through which one can pass back and forth between the old and the new worlds. Once again, in this work, I adapt this method to produce a cultural equivalent of it. This kind of adaptation is, once again, modelled by Elizabeth Rush in her analysis of the term tupelo. In that instance, Rush relies on some specialist knowledge: it is her etymological parsing of 'tupelo' that means she understands its name to have fallen out of sync with its environment. From there, with some imagination, Rush reconstructs the tree's true companion world. She describes how when "Wampanoag and Narragansett first harvested shellfish in these tide-washed shoals … Word of tupelos once told marsh waders what kind of topography to expect and also where to find relatively high ground" (2018, part 1). Rush, then, through a combination of etymology and imagination, constructs the tupelos for the reader as bisociated and, in so doing, renders them as passwords or portals. Rush used the tupelos as a nexus around which to build a world.

The methodology I use to analyse and build out the examples of ecocultural anachronism I present in this research follows from Rush's model. The type of specialist knowledge required, however, differs depending on the kind of unit of culture in question. Just as building a Pleistocene companion world out from an avocado stone requires knowledge of extinct herbivores where understanding a pronghorn's speed requires knowledge of ancient carnivores, different skillsets may be called upon. In most of the examples I present in this research - the examples, for instance, in Chapters 4 and 5, the kind of specialist knowledge required has not to do with etymology but with metaphors. As with Martin and Janzen in relation to ecological anachronism, however, or Rush in relation to tupelo, my goal is the same: I am seeking to restore to something its original context. So, for example, in Chapter 5 I discuss a series of pieces of climate communication based on the notion that climate change is rendering the cartoon cliché 'man on a desert island' anachronistic. This is happening, I claim, because, alongside the traditional Western model of the desert island, a new Western cultural imaginary of small tropical islands

is emerging in which they are threatened by rising sea levels. In order to unpack what is happening in these instances, I need to reconstruct the companion world of the original desert island cliché. This involves tracing a lineage of thought back through the Western literary tradition and to foundational texts like *Robinson Crusoe.* Pursuing this kind of work necessarily demands a mixture of methods all of which fall under the umbrella of cultural studies. Cultural studies is known for being "eclectic in the methods it uses" (McGuigan, 1997). Part of this stems from the fact that cultural studies sits at the intersection between several disciplines. Victoria O'Donnell says that "Cultural studies has genealogical connections with several academic areas of study, including anthropology, literary criticism, social history, semiotics, political economics, psychoanalysis, and feminist criticism" (2020). As such, it is "An interdisciplinary or post-disciplinary field of enquiry that explores the production and inculcation of maps of meaning" (Ibid). Barker and Galasinski argue that if cultural studies might be said to have one core concern, it is with "questions of shared meanings" (Barker and Galasinski, 2001, Chapter 1). Understanding a culture amounts to exploring "how meaning is produced symbolically through the signifying practices of language within material and institutional contexts" (Ibid).

Metaphors are certainly cultural in this sense of relying on shared meanings. Zinken, Hellstein and Nerlich make this point. They describe, for instance, how "When we think of progress in science in terms of a metaphor like SCIENTIFIC PROGRESS IS A FRANKENSTEIN ENDEAVOUR, we 'lean' on an obviously culture-specific concept (FRANKENSTEIN) to interpret processes going on in our society" (2008, capitalization in original). Metaphors are cultural models in Quinn and Holland's sense. They describe these models as "presupposed, taken-for-granted models of the world that are widely shared … by the members of a society" (1987, p.4). In this project, for instance, in Chapter 5, I consider the case of Shakespeare's Sonnet 18 which begins with the famous question: "Shall I compare thee to a Summer's day?". I demonstrate, through reference to the relevant literature, that several scholars have pointed out the Summer in this question is presupposing a certain cultural model of the season. Several authors have described how students around the world, often in former British colonies, encountering this poem as part of their school curriculum all the comparison into question. For Shakespeare, writing in England, Summer was the most romantic touchpoint on the calendar. For students in Botswana or in India,

however, that is not necessarily the case. In these two countries - and there are other examples - summer with its often intense heat (both countries routinely experience temperatures around 40 degrees Celsius in summer) can be experienced as a time of discomfort and hardship (I explore this idea more in Chapter 5). This is a straightforward critical reading of the poem which demonstrates that, despite entering into the canon of literature all over the world, the core comparison in this poem is not a universal but, rather a contingent one. The reason I include it in this project is that, over recent years, several climate communicators and commentators have noted how, even where summers have historically been temperate, the poem is beginning to jar. This is because climate breakdown is altering the face of summer all over the world and in Britain, for example, is turning it from a mild, temperate season into an unpleasantly hot one. In other words, scholars, for years, have pointed to the fact that the poem is locally contingent in a geographic sense - it presupposes British, temperate summer. Now, however, others are also pointing to the fact that it is locally contingent in a temporal sense - it presupposes Holocene summer.

The methodology involved in carrying out this research consists in unpacking from the original poem, the presupposed world tacit in it. This is done through a combination of literary analysis, historical contextualization and discourse analysis. Throughout this project, I deploy various tactics in order to carry out this work of context restoration. This follows a core tenet of cultural studies which suggests that "The methods should serve the aims of the research, not the research serve the aims of the method" (McGuigan, 1997).

3.5 Communicating Ecocultural Anachronism

This, of course, is a communications project and so it is in relation to communications that the analogy was, is some ways, most valuable. Ecological anachronism is a powerful communicative tool. The snowshoe hare is a case in point. Several commentators remark that the hare's plight compellingly illustrates the realities of climate breakdown. Given my focus on communications, I was, as

mentioned, particularly interested to find the case of the pronghorn and its anachronistic speed included in Fauconnier and Turner's *The Way We Think* as an example of their notion of conceptual blends (2002, p.115). Recall that Fauconnier and Turner demonstrate how conceptual blends can be produced wherever there is an instance of bisociation. In the pronghorn example, they show that the pronghorn is bisociated - into, on the one hand, an animal that runs fast from Pleistocene predators and, on the other, an animal that can still run fast in the Holocene even though those predators are now extinct. They cite a *New York Times* article about this case of ecological anachronism in which the pronghorn is described as fleeing from the ghosts of predators past. In the accompanying image, the pronghorn is represented in a photograph, the predators on its tail are drawn in by hand in pen and ink (in Ibid). This image-text combination is a blend - the modern-day pronghorn flees from the ghostly, extinct predators. The entire situation of the anachronism is compressed into this single compelling image. The image is both true and not - no such chase (involving ghost predators) has ever taken place. At the same time, however, despite its literal falsity, the blend does provide real insight into the situation.

Ecological anachronism is ideally suited to being communicated in conceptual blends for two key reasons. The first is that ecological anachronism automatically implies a bisociation with two ready-made input spaces. In any case of ecological anachronism, some entity is bisociated between the current world as it is and its vanished or vanishing companion world as was. In classic instances of ecological anachronism, the two input spaces naturally correspond to a Pleistocene and a Holocene input space. The second reason that conceptual blends work well as communicative packages for cases of ecological anachronism has to do with compression. Fauconnier and Turner describe blends as "compression tools par excellence" (Ibid). All Pleistocene pronghorns, for example, are compressed into a single pronghorn in one input space and all Holocene pronghorns are compressed into an individual Holocene pronghorn. These two are then compressed again into a single representative pronghorn in the blend. The great spans of time and enormous changes wrought by the Pleistocene - Holocene changeover are, moreover, compressed in the blend too. For example, the presentation of the predators as ghosts compresses into an image the idea that they are extinct.

In fact, so suited to blends is ecological anachronism, that as I have mentioned, quite literally from the outset, they have been used to communicate the idea. The pronghorn blend takes the form of a ghost story and ecological anachronism has been told as a ghost story from the moment of its conception as an idea.In the previous chapter, I mentioned that this spectral theme also appears in relation to the communication of instances of ecocultural anachronism. That both ecological and ecocultural anachronisms might be communicated as ghost stories should come, of course, as no surprise. After all, in the words of Peter Buse and Andrew Stott, "anachronism might well be the defining feature of ghosts" (1999, p.1). They write that "ghosts are anachronism *par excellence*" (Ibid, p.14). Like ghosts, they represent "the appearance of something in a time in which they clearly do not belong" (Ibid).. Like ecological anachronisms, ghosts straddle two worlds, two temporalities. The idea, however, that ecological and ecocultural anachronisms can be - and are - communicated via the same communicative packaging - that of the ghost story - is suggestive, again, of an analogy between them. As such, in this research, I set out to understand the ways in which conceptual blends (ghost stories and otherwise) can be used to communicate instances of ecocultural anachronism. For example, in Chapter 4, I analyse instances of wordplay featuring the glacial metaphor in journalistic contexts. I discover a type of wordplay enabled by the bisociation of glaciers into Holocene and Anthropocene glaciers. I demonstrate that the instances of wordplay are, as a consequence, examples of conceptual blends based around an instance of ecocultural anachronism

In chapter 5, I develop this analysis further. I have already detailed how I located instances of ecocultural anachronism. Using the insights from this research, I chose three core examples of climate communication that takes the form of a conceptual blend built around an instance of ecocultural anachronism and analysed each in turn. Mobilising conceptual blending theory as a methodological framework, I analysed the examples in order to understand the nature of the two inputs in each case. Moreover, I analysed the projection onto the blend involved in each case and considered the ways in which each example effectively compressed some element of climate breakdown for communication. With these three core examples, my goal is not only to highlight a previously undocumented phenomenon in climate

communication but also to outline the contours of a blueprint that can be activated by climate communicators using other examples.

Alongside this analysis, I also worked to understand the relationship between conceptual blending and ecocultural anachronism in a more hands-on way, by engaging in elements of practice-based research. Prior to undertaking this study, I worked in communications practice. As such, in this study, I was eager to use the skills I developed in that context to complement the more traditional kinds of research I was carrying out. Candy, Edmonds and Vear write that elements of practice based research ought to operate in a "complementary and interdependent" way with the rest of the research in order to further develop the key contributions of the research (2007). In the practice based elements of this research, my goal was to mobilize or activate some of the key insights from the research in real-world communicative contexts. As such, for instance, in Chapter 4 I focus in on the bisociation of the 'glacial' metaphor and examine how writers in journalistic contexts mobilize this bisociation into conceptual blend-based bits of wordplay. Seeking to understand this phenomenon from another perspective, I made a piece of climate communication - a short comedy video - built around this cire bisociation of the 'glacial' metaphor. This video takes the form of a conceptual blend. I entered this video in the University of Colorado, Boulder's annual climate comedy contest where it was awarded second place in the 2023 edition of the competition. Making this piece of communications practice meant I was able to manipulate the core bisociation and the blends in ways that would not be possible through more conventional forms of research. Moreover, because the audience judging the competition was not aware that the piece formed a part of a wider project, I was able to use the piece and the competition as a way of validating the core notion that blends based on instances of ecocultural anachronism constitute a compelling way of communicating climate breakdown. In this research, I present a total of three pieces of award winning communications practice.

3.6 A Serendipitous Discovery

Having in mind the analogy at the core of this research is what allowed me to see the insights presented in Chapter 7. While I was researching the use of the 'glacial' metaphor in journalistic contexts, looking for examples where writers had leveraged the bisociation of the metaphor for communicative effect, I noticed a small group of metaphorical deployments of glaciers that I found particularly interesting. In a piece in the *Guardian*, for instance, Angela Giuffrida writes that Italian schools are "vanishing like glaciers" due to falling birthrates. Similarly, Dwight Garner in the *New York Times* bemoans the fact that literary critics who are actually critical are "vanishing like glaciers" too. Had I not been working with my core analogy in mind, I might simply have dismissed these instances as irrelevant. However, viewed from within the analogy, I saw them for what they were: these were examples of metaphors (conceptual blends in their own right) grounded in the source domain of a new Anthropocene cultural model of glaciers.

I saw this, again, through the analogy of ecological anachronism. A key fact about instances of ecological anachronism often overlooked is that the species involved have not gone extinct. That is to say that, for instance, the Avocado may have lost its primary target evolutionary partners to extinction. Nonetheless, the Avocado continues, today, to grow and replicate successfully. Its companion world is gone, but it has adapted (and been adapted) to a new reality. In the case of the Avocado, in fact, because of human taste for its fruit, it has thrived. In other instances, the species limp on in a diminished way.

With these examples of the 'glacial' metaphor, I had discovered an ecocultural equivalent to this kind of adaptation. Writers had (as I show in Chapter 4), in an ad hoc playful way, suggested that the metaphor had been redefined. Rob Nixon, for instance, imagines that being rebuked for working at a glacial pace today might mean working "too darn fast" (2016). He's joking, of course, but he is able to do so because he is invoking an Anthropocene Western cultural model of glaciers that has emerged in the era of climate breakdown. In the instances of the "vanishing like glaciers" metaphor, that redefinition is no longer ad hoc. These writers are not joking:

they are using an aspect of nature produced by climate breakdown as reference point to describe some other process. With these instances (and I present several more) a new strain of metaphorical glaciers emerges in the language.

For most of this research, my focus is on the ways in which climate breakdown impacts on the reference points used by culture to make sense of the world. In Chapter 7, I suggest that the reverse phenomenon is also occurring and likewise offers a potent way of seeing climate breakdown occurring in second nature. In these instances, my focus is not on the loss of Holocene reference points, but, instead, on the emergence of Anthropocene ones. Chapter 7 confirms to me the notion that it is possible and profitable to think in terms of Anthropocene cultural models. The fact, for instance, that gentrification can be represented in terms of coral bleaching or that the BBC's reliance on licence fee funding means it can be depicted as a polar bear on a dwindling ice floe, means that these aspects of Anthropocene nature, of climate breakdown are becoming established enough in the popular imagination to function as source domain, as framing input for all kinds of ideas and phenomena. Witnessing climate breakdown in second nature is, as I document throughout much of this research, a story of loss and damage - what was once taken for granted disappears. At the same time, however, in Chapter 7 I suggest that the inverse is also an important part of the story. A new taken for granted background is emerging. Writers and other kinds of communicators are beginning to be able to rely on cultural shorthands and reference points whose origins lie in climate breakdown as a way of illustrating other ideas.

The mere fact of these emerging Anthropocene metaphors is interesting and itself constitutes evidence and impact of climate breakdown. At the same time, in Chapter 7 I once again utilise conceptual blending theory to demonstrate that analysing these emerging metaphors is valuable for climate communicators. I demonstrate that much climate communication to date - think, for instance of *Don't Look Up,* has been about finding the right metaphor for climate change. When, however, climate breakdown is no longer the target of the metaphor but, instead, its source, we see it in a new light. Analysing metaphors where elements of climate breakdown are the source is helpful in determining what the unconscious cultural shorthands and cultural models of climate breakdown people carry around with them are like. It is only by carrying out

this analysis, for instance, that I became convinced that it would be possible to tell the story of coral bleaching via the story of gentrification or to tell the story of glacial recession through the story of the decline of local newspapers.

3.7 Conclusion

At the core of this project is the central analogy outlined in this section. In the next chapter (Chapter 4) I use the example of the 'glacial' metaphor to produce a sort of thesis in miniature and to provide a global insight into the way this analogy can be used to generate valuable insights for climate communicators. The chapter after that (Chapter 5), I focus on analysing a series of instances of climate communication based on ecocultural anachronism. In this chapter I use the core analogy as a way of understanding both how these instances work and why it is that they are communicated in the way that they are. In Chapter 6, I use to analogy to develop a guide to finding instances of ecocultural anachronism. Finally, throughout the project, I present pieces of communications practice in which I seek to put these insights into real-world action.

Chapter 4: Case Study of the Glacial Metaphor

This chapter functions as a sort of thesis in miniature. In it, I present a case study which offers a global insight into the phenomena under investigation in this project. The subsequent chapters will then take each of the component phenomena in greater detail. This chapter is designed to offer a bird's eye perspective on the broader ideas involved.

This chapter takes as its focus the metaphorical term 'glacial' as in the phrase 'glacial pace' or 'glacial progress'. In this chapter, I argue that this phrase offers perhaps the clearest illustration of climate breakdown in second nature. The phrase is an example of a "ruptured reference" that has become unmoored from its Holocene companion world (Groves, 2020, p.10) . At the same time, a new Anthropocene cultural model of glaciers is emergent. This new cultural model has even come to act as reference point to a new, emergent Anthropocene glacial metaphor.

The chapter proceeds through a number of steps:

- First, I consider the cultural model of glaciers entailed in the metaphor 'glacial pace'. In other words, I decompress the compression inherent in 'glacial' and demonstrate that the glaciers in 'glacial pace' are Holocene glaciers.

- Second, I introduce the new and emerging Anthropocene cultural model of glaciers brought about through climate breakdown.

- Third, I explore how the coexistence of these two widely held cultural models of glaciers is rhetorically exploited by writers. I demonstrate that writers recruit both cultural models of glaciers in creative ways in order to make Holocene-Anthropocene conceptual blends that jar our sense of reality and help us to see the Earth as a ruptured (or rupturing) reference.

- Finally, I show that the new, Anthropocene cultural model of glaciers has given rise to its own, Anthropocene ‘glacial’ metaphor.

4.1 Glacial Pace

The metaphor of ‘glacial pace’ may be the clearest single example of the dynamic I seek here to convey. A number of writers have pointed out how the metaphor appears to have fallen out of sync with the world as a result of climate breakdown. Rob Nixon, for instance, wonders whether, because of rapid glacial melt, we have reached “a linguistic tipping point where ‘glacial pace’ is incapable of conveying meaning with any clarity” (Nixon, 2018). Elizabeth Rush makes the same point, observing that, “we say things move at a glacial pace, but that metaphor doesn’t necessarily hold anymore” (2023, p.286) . Rush continues, “the world has fallen out of sync with the metaphor it made” (Ibid, p.297). These observations are made almost in passing but for the purposes of the contribution made by this PhD research, it is important to tease out in detail what underlies them. In his piece, Nixon quips that the “glacial” of 1988 is not the “glacial” of 2018, when he wrote the piece. This is exactly right.

This project is guided in large part by conceptual blending theory and, in order to make this analysis of the term glacial, I turn to a concept from that theory. I make use, in this chapter, of Seana Coulson’s notion of “cultural models” (Coulson, 2006). According to Coulson, cultural models are “idealized cognitive models of sociocultural phenomena” (Ibid, p.187) which are “widely shared by culture members” (Ibid, p.187). Coulson writes that “meaning emerges from the integration of linguistic and nonlinguistic knowledge, as meaning and background are intimately intertwined” (2001, p.31-32) . In other words, as we speak, we trigger our interlocutor to access and activate various cognitive and cultural models from their long term memory and backgrounded assumptions. Coulson says, “we constantly invoke frames from background knowledge to structure expectations and make inferences that go beyond what's immediately present” (Ibid, p.35) Coulson provides some examples: when we use the term bachelor, she says, we take for granted that our

audience has in their minds some “common assumptions about the normal course of a man's life in Western society” (Ibid, p.18). Coulson emphasises, however, that this recourse to background knowledge is a more pervasive and subtle phenomenon too. For instance, as previously referenced, she points out that when we make an apparently transparent declarative statement like ‘the cat is on the mat’, we activate for ourselves and others a “tacit assumption of a gravitational field” (Ibid, p.9).

Another term from conceptual blending theory that is relevant here is compression (Fauconnier and Turner, 2002). Over time, meaning is compressed into cultural models. So for instance, to cite Coulson’s example, a rich associative web of meaning is compressed into the notion of bachelor. The word is freighted through time with association and implication such that it might trigger for us notions of bachelor pads or eligible bachelors. Bachelor, then, in the parlance of conceptual blending theory is a compression. In conceptual blending theory, communication is understood to rely on our being able to depend on and exploit commonly held background assumptions, compressions or cultural models. Turning, in this context, to the case of the term ‘glacial’, I suggest that, because of climate breakdown, the predominant Western (English language) cultural model of glaciers is coming under challenge from a new Anthropocene cultural model. Today, as we exist on the Earth - Eaarth or Holocene - Anthropocene divide, both the old, Holocene, and new, Anthropocene, cultural models are simultaneously extant and active. As a result, I argue in this chapter that we stand today at a sort of linguistic inter-glacial. We (in the West) increasingly hold in our heads two cultural models of glaciers which are not only different from one another but, in some sense, inversions of each other. I have already noted that Arthur Koestler’s theory of bisociation is thought of as an early forerunner of conceptual blending. I briefly restate the fundamental dynamic here. “Bisociation” is a term coined by Koestler to describe what he saw as the fundamental characteristic of human creativity and innovation (1962, p.35). Bisociation arises where a term, idea or situation is perceived of in two “self-consistent but habitually incompatible frames of reference” (Ibid, p.35). In this scenario, Koestler explains, the idea that is biscociated is made to “vibrate simultaneously on two different wavelengths” (Ibid, p.35). This biscoiation produces a tension or even a paradox which - in a moment of creative insight - is resolved at a higher level of integration. I argue, in this chapter, that metaphorical glaciers are,

increasingly, bisociated. We now see them in two frames of reference at the same time: a Holocene and an Anthropocene frame. In the next section, I work to decompress the classic Holocene compression, to discover what entailments and allusions are elided in our traditional metaphorical model of glaciers.

4.2 The Cultural Model of Holocene Glaciers

In this section, my goal is, in effect, to reverse engineer the glacial metaphor, to decompress the compression, such that I can discover what cultural model of glaciers the glacial metaphor is founded upon. Conceptual blending theory includes a theory of metaphor. Most of the work that has been done on unpacking metaphorical meaning using critical discourse analysis, however, uses Lakoff and Johnson's conceptual metaphor theory. Metaphor in the two theories functions in a similar way. In this analysis, I use some terminology from conceptual metaphor theory.

Etymologically, the term 'metaphor' implies a 'carrying across'. In conceptual metaphor theory this carrying across is described in terms of 'mapping' (Lakoff & Johnson, 1980). Conceptual metaphor theory holds that features of a concrete, physical "source domain" are mapped onto corresponding elements of a "target domain" (Ibid). In the glacial example, then, conceptual metaphor theory leads us to see that features of physical glaciers (e.g. the pace of their movement) are mapped onto various kinds of targets described by the metaphor: bureaucracies, for instance. Not all features of a source domain are mapped onto a target domain. In other words, only certain aspects of literal glaciers are transposed to figurative ones. In this sense the nature of mappings is selective. In the case of the glacial metaphor, the feature of glaciers most clearly and saliently mapped onto the target domains is the pace of glacial movement. Indeed, The Oxford English Dictionary provides the following definition for 'glacial' as used in a metaphorical sense: "Of the pace of any process: extremely slow. Of a process: taking place very gradually" (Oxford English Dictionary, 2025). Crucially, however, conceptual metaphor theory proposes that metaphors have a network of what are termed "entailments" (Lakoff and Johnson,

1980). This is the idea that by describing a bureaucracy as moving glacially one does more than simply describe a slow pace of movement. Other mappings from the source domain of physical glaciers are also simultaneously activated, even if on a much less obvious level. This is another way of arriving at Coulson's 'cultural models' insight: when we refer to something, we activate a whole network of backgrounded knowledge and assumptions in our audience. Glacial is not simply a synonym for slow: by using this metaphorical term, a writer invokes - even if unconsciously - a whole conceptual framework of glaciers. In this section, I am interested in these less obvious entailments, in building out the cultural model. We know that the metaphor constructs glaciers as moving slowly, but what other properties are implied - or entailed - by it?

To answer this question, I use critical discourse analysis. More specifically, I look to critical metaphor analysis, which is a subtype of critical discourse analysis that aims to analyse metaphors in precisely this way: to draw out a metaphor's entailments (Johnsin, 2005). In this section, I perform a critical metaphor analysis of the glacial metaphor in order to tease out additional mappings. In this analysis, as per the fundamental tenets of critical discourse analysis, my goal is to draw out that which is taken for granted, as background, in the glacial metaphor. In so doing, my aim is to develop a clearer picture of the cultural model of glaciers invoked by the glacial metaphor. Ultimately, as I will demonstrate, I find that the model of glaciers underpinning the glacial metaphor - the metaphor's source domain - is a nineteenth century Western model of glaciers whose roots stretch back to eighteenth and nineteenth century European Alpinism and the then novel science of glaciology.

Critical metaphor analysis uses the tools of critical discourse analysis to draw out the implied meanings contained in a metaphor. Andreas Musolff argues that metaphors imply "figurative mini-narratives that carry an evaluative stance" (Musolff in Koller, 2024, p.84) . In other words, by using a metaphor, a text producer taps into a wider scenario connected to that metaphor. Veronika Koller writes that it is productive to think of a metaphor's source domain as a kind of stage "complete with props and backdrops": it is an environment in which a mini-narrative unfolds (Ibid, p.84). Critical metaphor analysis aims to link an individual manifestation of a metaphor to this wider scenario. Critical metaphor analysis is interested, moreover, in determining how a

metaphor is marshalled in order to do ideological work. The selective nature of metaphorical mappings means that, when a metaphor is employed, certain inferences about the target domain naturally follow. I am interested in analysing the glacial metaphor in real everyday use in order to draw out additional entailments (beyond the most obvious one: speed of movement). I do this by examining the kinds of figurative mini-narratives in which the metaphor appears to determine whether other characteristics associated with literal glaciers are explicitly or implicitly mapped across.

To find examples of the glacial metaphor in real everyday use, I searched the archives of the *Irish Times,* Ireland's national newspaper of record, and the *Times,* the UK's oldest national newspaper of record for instances of the phrase 'glacial pace'. I chose to search for this particular conventionalised turn of phrase for two principal reasons. In the first instance, I needed to narrow my results to produce a more manageable volume of results in a way that would not skew them. 'Glacial pace' provided a way for me to do this. Multiple dictionaries such as the Cambridge dictionary, Collins and Dictionary.com produce "glacial pace" as their example sentence for the metaphorical meaning of glacial. As such, 'glacial pace' emerges as a fixed expression or collocation and is not a phrase that belongs, for example, to any particular specialised lexicon or jargon. Secondly, by searching for this idiomatic expression, I ensured that virtually all of my results contained instances of the glacial metaphor. In other words, using this fixed expression was a way of excluding articles in which the term 'glacial' was used literally. Next, I narrowed my search by date. I am primarily interested in the contemporary meaning of the term. I want to determine what the glacial metaphor means in the era of climate breakdown and so I limited my results to examples that appeared in the decade between January 1st 2013 and January 1st 2023. This produced 179 total instances, 62 in the *Irish Times* and 117 in the *Times.* From these 179 results, I began to draw out implied or latent entailments. This produced the following themes:

4.2.1 Glaciers are constructed as slow processes

'Slowness' is the element of glaciers most clearly mapped from literal glaciers onto figurative ones. Often, however, the metaphor is used to denote a particular species of slowness: it is deployed to describe slow and complex bureaucratic processes. More specifically, it is used to describe slow public bureaucracies. A letter in the *Irish Times*, for instance, refers to the "glacial pace of implementation of the National Dementia Strategy"[6]. Similarly, referring to negotiations at supra-national EU level, another letter says that "Trade negotiations typically take years to complete [and] proceed at a glacial pace"[7]. It is frequently legal systems that are described as moving glacially. Peter Cluskey, for instance, writes in the *Irish Times* of the Khmer Rouge Tribunal that "The progress of its cases has been "glacial" (a term often applied too to justice in The Hague) and hugely expensive"[8]. The *Times* refers to "the glacial pace of India's justice system"[9]. Journalist Tristan McConnell writes of a legal case in Kenya that it "has proceeded at a glacial pace, stymied by Kenya's notoriously slow and backlogged judiciary"[10]. Of the Nigerian system, journalist Jeremy Kelly writes that "prosecutions are still proving difficult, with most cases proceeding through the corruption-riddled courts at a glacial pace"[11]. Ireland's legal system is described in the same terms Jack Horgan-Jones, writing about mortgage arrears in Ireland, says, in the *Irish Times,* "One factor limiting repossessions is the glacial nature of putting these cases through the courts"[12]. The *Times,* meanwhile, writes that: "The problem is that Ireland's legal system move (sic.) at a glacial pace"[13]. Finally, the "wheels of justice" in the (UK) Manchester bombing case are said by Jawad Iqbal in the *Times* to be "turning at a glacial pace"[14].

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[6] O'Neill, D., (2017). 'Life expectancy and dementia', The Irish Times, 2 March, p. 15.
[7] Schnittger, F., (2021). 'EU and Ursula von der Leyen's dilemma', The Irish Times, 31 March, p. 13.
[8] Cluskey, P., (2015). 'The Court's goal is not just worthwhile but admirable; An Irish barrister says the tribunal inquiring into the activities of Cambodia's Khmer Rouge is essential', *The Irish Times*, 23 October, p. 10.
[9] Pagnamenta, R., (2013). 'Justice is too slow to keep the rogues out of politics', The *Times* (London), 3 January, p. 27.
[10] McConnell, T., (2013). 'Scotland Yard trio fly home after Kenya terrorism trial fiasco', *The Times (London)*, 5 July,
[11] Kelly, J., (2017). 'Whistleblowers get a share of stolen riches in corrupt Nigeria', *The Times (London)*, 18 April, p. 30.
[12] Horgan-Jones, J., (2019). 'Mortgage debt: the chronic cases', *The Irish Times*, 2 February, p. 2.
[13] McEnaney, T., (2017). 'Apple objections leave a bad taste', The *Times* (London), 18 October, p. 35.
[14] Iqbal, J., 2019. 'Manchester victims' families do not deserve this delay', *The Times (London)*, 27 May

Looking at this entailment through the lens of critical discourse analysis, we see that the glacial metaphor is being made to do ideological work. Large, established, slow public institutions in being constructed as glacial are unflatteringly contrasted with contemporary nimble, agile, just-in-time neoliberal disruptors. For example, in the *Irish Times*, the "glacial progress of a public project to build elaborate new cycle lanes" is unfavourably compared to private development: "In much the same timeframe, a private developer has lashed up a 12-storey building in Donnybrook"[15]. Or, to use another example related to the legal system, Jennifer O'Connell, writing about so-called paedophile hunters describes "digital vigilantism, fuelled by individuals who, frustrated by what they see as the glacial pace of the established forms of justice, set up online stings"[16]. The 'glacial' pace of public bureaucracies is constructed as the product of red tape and regulation which, in turn, constructs deregulation and privatisation as the solution to that slowness. Digby Jones, for instance, former Director General of the Confederation of British Industry, argued for Brexit in 2013 by claiming that leaving the EU would leave the UK "free to negotiate, at more than the current glacial pace, free-trade agreements with the rest of the world"[17]. Thinking in this way helps to highlight a latent entailment of the glacial metaphor: glaciers are not simply referenced for their speed (or lack thereof) but also for their lack of manoeuvrability, perceived lack of responsiveness to their environments and to the idea that they are not simply moving slowly but, rather, that they are processing ice slowly.

4.2.2 Glaciers are constructed as massive

This second point is closely related to the first. Very often, the institutions and organisations described as moving 'glacially' are of very large scale. To illustrate this point, the following is a list of a small selection of the organisations and institutions

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[15] The Irish Times, (2023). 'Lifting eviction ban could be grave error by Coalition', *The Irish Times*, 11 March, p. 15.
[16] O'Connell, J., (2017). 'ONLINE JUSTICE; From digital vigilantism to the #MeToo movement, we are witnessing a revolution in our concept of equality and justice. Much good may come of it, but at what cost?', *The Irish Times*, 25 November, p. 1.
[17] Coates, S., (2013). 'If we can't change EU we must leave, says ex-CBI chief', The *Times* (London), 7 November, p. 26.

whose behaviour is described using the 'glacial' metaphor: the European Union[18], the Catholic Church[19], the Irish government[20], FIFA[21], UEFA[22], and "French bureaucracy"[23] - this is just a small selection from the total list. Frequently, then, the 'glacial' metaphor implies that large organisations are slow precisely because they are large. Like the metaphor of turning a tanker, the glacial metaphor is often deployed in instances where institutions are constructed as having painfully slow but immensely powerful forward momentum which is almost impossible to hasten, arrest or redirect. As before, the metaphor does ideological work here: when deployed in a business context, for instance, it suggests that the nimble, agile start-up is capable of running rings around the slow, lumbering, 'glacial' giant. In one article, for instance the *Irish Times* constructs the traditional or 'legacy' banks as being "glacial" when compared to Fintech startups like Revolut[24]. Once again, the metaphor is doing ideological work. The just-in-time. Nimble and agile ideals of neoliberal business are favourably compared against the hulking "glacial" slowness of 'legacy' institutions. This is another available entailment of the glacial metaphor: great size means not only slowness but inflexibility. This is related to the next entailment:

4.2.3 Glaciers are constructed as intransigent holdouts of a previous age

The glacial metaphor is often deployed in contexts where an organisation or institution is constructed as an intransigent, stubborn relic of a previous era. Glacial is deployed to describe the collision between such intransigent holdouts and the pace and practices of the modern world. Mark Hennessy, for instance, in an *Irish Times* article on reform of the United Kingdom's upper parliamentary chamber, the

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[18] Lynch, S., (2016). 'Visa-free travel in EU for Turkish citizens still has arduous journey ahead; The controversial promise to Ankara was always going to meet opposition', *The Irish Times*, 5 May, p. 11.
[19] The Irish Times, (2022). 'Catholic Church a pivotal moment', The Irish Times, 19 August, p. 11.
[20] Leahy, P., (2021). 'Lack of serious North-South engagement signals joint approach on Covid control measures unlikely; Dublin understands that the DUP will not agree to a joint approach', The *Irish Times*, 29 January, p. 3.
[21] Marcotti, G., (2015). 'Transfer fees could be thing of past if players' union wins war with Fifa', The *Times* (London), 21 September, p. 15.
[22] Winter, H., (2020). 'This does not exonerate Manchester City but it grievously harms game', The *Times* (London), 13 July
[23] Sage, A., (2016). 'French aim to poach City's fintech finest', *The Times (London)*, 29 September, p. 34.
[24] The Irish Times, (2023). 'Revolut IBANs may be tipping point bank sector fears; One of the main stumbling blocks for fintech is to be removed', *The Irish Times*, 24 January, p. 19.

House of Lords, outlines how the House is seen as a vestige of an earlier era that has proven remarkably difficult to reform. In this context, he writes that "Reform has occurred over the last century, if at a glacial pace: the Lords lost the power to block legislation permanently in 1911. Hereditary [peers] began to lose their dominance from the 1940s"[25]. The UK's upper chamber is, he says, considered by many to be "stuffy and octogenarian in style"[26]. The article constructs the house, in other words, as a stubborn vestige of an older order in which power was transferred by bloodline rather than by ballot. Similarly, Carl O'Brien deploys the metaphor in a discussion about the push to have the Catholic church divest from national school patronage in Ireland. O'Brien explains that there is widespread agreement that "placing so much control of primary schools in the hands of religious denominations is out of step with the needs of an increasingly diverse society"[27]. Nonetheless, the church is slow to let go of that control: O'Brien writes that "The glacial pace of progress prompted Catholic Archbishop of Dublin Diarmuid Martin in recent times to criticise elements of the church for "dragging their feet" over the issue"[28]. Once again, the church's patronage of schools is constructed as a stubborn holdout of an earlier order. The *Irish Times* article about the legacy banks provides another good example. The big banks, the article suggests, move glacially because they are used to holding a position of entrenched power in Irish society. As the article states, "One of the reasons Irish banks have been slow to respond to the challenge is complacency borne out of experience"[29].

Glacial movement is constructed, then, as the reluctant movement of the very old and entrenched. In the *Times* Saudi Arabian society is said to have "modernised only at a glacial pace, led by a royal house distinguished chiefly by its timidity*"[30].*

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[25] Hennessy, M., (2013). 'House of Lords seen as a stuffy but useful revising chamber for legislation; Reform has moved at a glacial pace and the latest attempt ended in failure', *The Irish Times*, 2 October, p. 4.
[26] Ibid
[27] O'Brien, C., (2018). 'Church control of education out of step with society; While our school population has changed since the last papal visit, much of the system remains the same', *The Irish Times*, 24 August, p. 4.
[28] Ibid
[29] The Irish Times, (2023). 'Revolut IBANs may be tipping point bank sector fears; One of the main stumbling blocks for fintech is to be removed', *The Irish Times*, 24 January, p. 19.
[30] Boyes, R., (2017). 'City in the sand that could save a kingdom; Building Neom, a 10,000-square-mile megalopolis, will be a lifetime's work for Saudi Arabia's young crown prince', The *Times* (London), 28 October

Similarly, it is said in the *Times* of the UK's parliament that "Insofar as parliament makes any effort to align itself with the modern world, it does so at a glacial pace"[31]. In the *Irish Times*, meanwhile, reform of Cuba's economy is described like this: "Reform has proceeded at a glacial pace, slowed by a bureaucracy worried about losing its privileges and by the revolution's old guard, suspicious of any change that might nudge Cuba closer to capitalism"[32]. Similarly, writing about David Trimble, the same paper describes him as "truculent and obstructive" and "willing to edge unionism forward at a glacial pace"[33]. In all these cases, the 'glacial' metaphor is used to characterise situations in which an individual or institution is constructed as a holdover of a previous era moving reluctantly into the modern world.

4.2.4 Glaciers are constructed as moving forwards inexorably

As suggested by this sense of 'edging unionism forward', metaphorical glaciers are constructed as moving forwards. The term 'progress', for instance, often appears in connection with the phrase 'glacial pace'. Carl O'Brien writes in the *Irish Times,* for instance, about the "glacial pace of progress" in divestment by the Catholic church from patronage of Irish primary schools[34]. Similarly, Stephen Collins remarks on the "glacial pace of progress" in government formation talks[35]. Two public consultations on public transport projects are said, by the paper, to be "progressing at a glacial pace"[36], meanwhile. Etymologically, as well as colloquially, of course, the term 'progress' suggests forward movement. The word is derived from the Latin prefix 'pro', meaning 'forward' and the Latin verb 'gradus', meaning 'step' or 'walk' to provide the sense of walking forward. The word 'proceed' has a similar etymology - it

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[31] The Times, (2021). 'No Jackets Required ... For Now; Though MPs should be smartly dressed, parliamentary codes need an update', *The Times* (London), 25 February, p. 27.
[32] Abi-Habib, M. & Augustin, E., (2021). 'Cuba takes a leap into unknown without a Castro; Raúl Castro steps down at time of deep economic crisis and generational divide', *The Irish Times*, 21 April, p. 6.
[33] The Irish Times, (2022). 'Trimble's life offers lessons in leadership for Dublin', *The Irish Times*, 30 July, p. 13.
[34] O'Brien, C., (2018). 'Church control of education out of step with society; While our school population has changed since the last papal visit, much of the system remains the same', *The Irish Times*, 24 August, p. 4.
[35] Collins, S., (2020). 'Divided Greens will make for unstable coalition', *The Irish Times*, 12 June, p. 10.
[36] The Irish Times, (2022). 'Connecting our island will unlock its potential; Investment is needed to develop rural public transport links on both sides of the Border', *The Irish Times*, 21 June, p. 14.

is constituted from the same Latin prefix (‘pro’), and the Latin verb ‘cedere’ meaning ‘to go’. Like ‘progress’, ‘proceed’ also appears in the context of the glacial metaphor. As such, Tristan McConnell writes of a legal case that it “proceeded at a glacial pace”[37]. Similarly Robert Lea describes the cause of equality for women in the finance industry as “proceeding at a glacial pace”[38]. David Charter characterises Turkish negotiations on joining the EU with the same phrase[39]. Some other processes said by the *Times* to be ‘proceeding at a glacial pace’ include negotiations on buying gambling software company Playtech[40], Celtic FC’s recruitment of new players[41], diversity and inclusion policies in Formula One[42] and the disciplinary processes of the UK Labour party. The glacial metaphor, then, is used to describe situations in which movement is said to be very slow but, at the same time, inexorably and powerfully forward. This entailment is derived, no doubt, from the dynamics of ice movement within real glaciers. Glaciers are, in a sense, like rivers. When snow falls on the glacier head, it is compacted into ice. From there, it flows very slowly through the glacier to the glacier’s terminus or snout. Ice only ever flows in one direction - downhill from head to terminus.

Another forward-leaning word that appears alongside the glacial metaphor, though less frequently than either ‘progress’ or ‘proceed’ is ‘advance’. Matthew Moore, for example, writes in the *Times* that “Brexit is advancing at a glacial pace”[43]. Real glaciers can also advance. Advancing is different to intra-glacial movement in that it refers to the advance or retreat of a glacier’s snout in a valley. Glacial advance in this sense is better thought of in terms of growth (or shrinkage) than in terms of movement. Nonetheless, the net effect of glacial growth is that the glacier appears to advance forwards in space. As such, while the glacial metaphor undoubtedly refers

[37] McConnell, T., (2013). 'Scotland Yard trio fly home after terrorism trial fiasco; Kenya', *The Times* (London), 5 July, p. 35.
[38] Lea, R., (2016). 'Disruption on the railway line', *The Times (London)*, 18 April
[39] Charter, D., (2017). 'Bring back death penalty and the EU door will slam shut', *The Times* (London), 17 July, p. 29.
[40] Walsh, D., (2022). 'Playtech deal given extended deadline', *The Times (London)*, 18 June
[41] Grant, M., (2021). 'Rangers right at home as Hagi brings them to life', *The Times* (London), 23 September, pp. 68-69.
[42] Clancy, R., (2021). 'New F1 chief: I hope Lewis Hamilton stays - but if he does go we have other great drivers...', *The Times* (London), 5 June
[43] Moore, M., (2018). 'We're not just for 23-year-olds: Today editor defends Humphrys', *The Times* (London), 6 September, p. 11.

to the slow movement of ice within a glacier, it is possible that the notion of glacial advance is latently mapped onto the glacial metaphor too.

In summary, then, analysing usage of the glacial metaphor gets us beyond the simple idea of slowness. Also entailed by the metaphor - to varying degrees in various situations - are ideas of scale, lack of agility, stubbornness, entrenchment, forward momentum and process. I argue that these various entailments suggest that the glaciers imagined by the glacial metaphor are like those discovered and described by eighteenth and, more so, nineteenth century European explorer-scientists.

4.3 Metaphorical Glaciers are Nineteenth Century Glaciers

The Western science of glaciers emerges at the end of the eighteenth century and expands in the nineteenth (Clarke, 1987). Tracing the history of keywords confirms this: the OED's earliest example of the noun 'glacier' is from 1744; the earliest example of 'glacial' to mean "pertaining to glaciers" is from 1858 (Oxford English Dictionary, 2025). Louis Agassiz publishes his *Études Sur les Glaciers* in 1840; John Tyndall's *The Glaciers of the Alps* appears in 1860. In the broadest terms, this new science of glaciers generated two principal insights for the European understanding of glaciers: firstly, that glaciers move and, secondly, that glaciers once covered a much greater extent of the Earth's surface in what came to be called the ice age (Clarke, 1987).

Referring to the first of these discoveries, in an article on the history of glaciology, Gary Clarke writes that "The most interesting property of glaciers is that they flow" (Clarke, 1987, p.4). This was the fact that, he says, "intrigued the earliest scientific investigators" (Ibid). The first documented measurements of glacial flow were taken by Franz Josef Hugi between 1827 and 1836 by tracking the movement of a boulder on the Unteraargletscher glacier in Switzerland (Ibid). In those nine years, the rock in question moved more than a kilometre (Ibid). These results were so surprising that, at the time, they were greeted with considerable scepticism. Agassiz himself

describes this sense of doubt: “opponents of the theory insisted that it did not follow, because the mass of rock had moved, that therefore the mass of ice had moved. They believed that the boulder might have slid down for that distance” (Agassiz, 1864). Agassiz planted metal stakes in the same glacier to confirm the result: the glacier was, indeed, moving. By the middle of the nineteenth century, then, glaciers began to be understood as massive rivers of slowly flowing ice. Like rivers, glaciers were understood as processes with inputs and outputs - snow falling at the top of the glacier is condensed into ice which slowly flows down through the glacier and ultimately melts at the glacier’s snout. It is this model of glacial dynamics that is mapped onto the glacial metaphor: glaciers are slowly moving processes that flow in one (forward) direction. It is important here, too, to note that, as Garry Clarke points out, Agassiz and colleagues would, overwhelmingly, have encountered glaciers that were advancing (1987). Clarke suggests that, when Agassiz and colleagues were studying it, “Unteraargletscher was probably near its Little Ice Age maximum” (Ibid, p.9) . As such, Clarke notes, “The reality of glacier advances was well recognized by Agassiz and his contemporaries” (Ibid, p.9) . As mentioned earlier, it is possible that this feature of glaciers - that they advance - is latently mapped onto the glacial metaphor too.

If the primary surprise discovery of nineteenth century glaciologists was that glaciers move, then the second was that the glaciers they studied were in effect the last holdouts of a much larger cryo-network that had covered large parts of the (northern) globe during what came to be known as the ice age. Louis Agassiz was, again, at the centre of this discovery and the ensuing debate. He was not the first to propose the idea of an ice age, but it is his 1837 lecture the so-called “Discourse of Neuchatel” that is often regarded as the effective starting point of the wider debate (Flint, 1968). Agassiz’s key insight was to see that nineteenth century glaciers were remnants of much larger ice sheets and that the dynamics they exhibited were responsible for shaping innumerable landscapes across the northern hemisphere (Agassiz, 1967). Agassiz proposed that it was glaciers that had deposited the large erratic boulders that had long interested geologists. Until his theory of glacial action, it had been supposed that the biblical flood had been responsible. Agassiz’s theory of glaciation was so controversial precisely, in large part, because it was a secular model of past geological change that was truly biblical in scope and scale. It is this

element of glaciers that explains the other entailments of the glacial metaphor: that it is used in contexts where institutions are seen as intransigent holdouts or relics from an earlier time. Moreover, the enormous landscape altering power of glaciers is mapped onto metaphorical entailments regarding scale and unstoppable momentum.

These, then, were the most salient facts about glaciers discovered by the new science of glaciology: they move very slowly but with great power and they are the last stubborn and deeply entrenched holdouts of a former epoch. Whenever the metaphor of ‘glacial pace’ is deployed, it is glaciers of this nineteenth century cultural model that can be glimpsed lurking in the background. The nineteenth century understanding of glaciers and their dynamics is, in other words, the source domain for the metaphor. As mentioned, the (literal) adjective ‘glacial’ - meaning pertaining to glaciers - is dated by the OED as emerging in 1858. The same dictionary gives 1922 as the date of the first known use of the figurative adjective ‘glacial’ (Oxford English Dictionary, 2025). The dictionary defines this figurative sense of the word as “Of the pace of any process: extremely slow. Of a process taking place very gradually” (Ibid). The first known use provided is in James Joyce’s *Ulysses.* This timeline - the figurative sense of the term emerging early in the twentieth century - further supports the idea that the glaciers encoded in it are of the kind discovered in the alps just decades earlier. If, moreover, the OED is correct in pinpointing *Ulysses* as the text in which this new figurative sense emerges, then, like the scientific understanding of glaciers upon which it is founded, it emerges in Switzerland.

Even before the emergence of this metaphor, the scientific and cultural understandings of glaciers in nineteenth century Europe were inseparably intertwined with one another. Peter Knight describes how the scientific understanding of glaciers and their motion produced analogue in art. He writes that “For both the scientist and the artist the laws of motion were at the heart of the glacier story. Artists and scientists frequently draw out the same key issues: time, movement and scale” (Knight, 2019, Ch1). Knight goes on to say that “The length of glacial time, the slowness of glacier motion and the enormity of glacier scale sit well together in the imagination” (Ibid, Ch1). In fact, taken together, these characteristics of glaciers give rise to a kind of glacial sublime. The sublime is a European Romantic notion that refers to all that in nature sparks a feeling of frightened awe. The feeling

triggered by the sublime is ideally conceived of as dialectical: on the one hand it is a feeling of immense overwhelm and terror but at the same time it is a feeling of being awe-struck and inspired. Klaus Dodds argues that ice was a key domain in which ideas of the sublime were explored . He writes that "Ice embodied and reflected the spirit of the sublime" (Dodds, 2018, Ch.3) . Dodds points to Edwin Landseer's 1864 painting *Man Proposes, God Disposes* as a paradigmatic depiction of what he terms the "polar sublime" (Ibid, Ch. 3). The painting depicts the wreckage of the Franklin expedition strewn across a hostile, if spectacular, icy landscape in which shards of ice rise like spikes all around. Peter Knight, writing about glaciers rather than icebergs, also refers to the sublime in his account of the cultural meaning of ice. In his view, the polar expeditions of the late nineteenth and early twentieth centuries, by invoking ideas of the sublime, constructed ice as "something to be crossed, surmounted, overcome on the way to a greater prize; glacier as fearful challenge; worthy adversary" (Knight, 2019, Ch.1).

Bruce Hevly documents how ideas of the glacial sublime impacted not only on artistic representations of glaciers but also on the scientific process of studying them. He describes how early European glaciologists tapped into Romantic ideals "of direct action, lonely commitment, and manly risk" (Hevly, 2003, p.66) to lend a sort of rhetorical underpinning to their scientific work. Hevly describes how "Alpinist-scientists such as Forbes and Tyndall presented themselves as arguing from firsthand experience on the subject of glacier mechanics and appealed to the deference due them as men who had undergone a rigorous experience on behalf of science" (Ibid, p.66). These Romantic explorer-scientist figures were not only seeking to develop scientific understanding, they were also engaged in an aesthetic enterprise. As such, accounts of their exploits naturally proved inspirational to artists. Hevly documents how art critic John Ruskin, for example, was deeply taken with the work of glaciologist James David Forbes. Hevly writes that Ruskin's "artistic aesthetics parallelled Forbes's scientific ones" (Ibid, p.67). Hevly concludes that "figures such as Forbes, Ruskin, and Tyndall did not follow such a neat division between science and romanticism" (Ibid, p.84). The scientific study of glaciers in nineteenth century Europe, then, was already a somewhat artistic enterprise and, moreover, artists of the same period drew on accounts from Romantic explorer-scientists in their work. As such, from the outset of the science of glaciology, physical

and figurative, literal and literary glaciers are connected. It is in this context that I argue that, when it emerged in the early 20th century, the metaphor of 'glacial' should be understood as an abstraction both from prevailing scientific and cultural ideas about glaciers in Europe.

There is, then, ample evidence to suggest that the glaciers implied by the metaphor of glacial pace are of this nineteenth century European variety. The problem for the metaphor, however, is that today's climate breakdown is producing a new, competing cultural model of glaciers in the West. It is to the notion of Anthropocene glaciers we now turn.

4.4 Anthropocene Glaciers, or Glaciers on Eaarth

Anthropogenic climate breakdown is giving rise to new Western understandings of glaciers. Glaciers are especially vulnerable to global warming caused by climate change. The effects of warming are amplified in precisely the places where glaciers are generally to be found: at high altitude in mountain regions and at the poles. As a result, the IPCC has stated that "Glaciers are expected to continue to lose mass throughout the 21st century," and that "small glaciers around the world will lose most of their total mass at 1.5℃ warming above the pre-industrial average (Adler et al., 2022, p.2276). The IPCC stresses that there are significant differences in the projected glacial losses under the various emissions scenarios and that many significant glaciers would survive in the lower emissions scenarios. The fact that real glaciers around the world are under threat produces concomitant changes in the cultural understanding of glaciers. As Peter Knight says, "Glaciers have a particular place in the human imagination … But the nature and complexity of that symbol is changing" (2019, Ch.1). As global warming pushes glaciers into rapid retreat, they come to be thought of as "victims of human activity - an endangered species" (Ibid). Julie Cruikshank closely echoes Knight's terms. She writes that "Concerns about global climate change are giving glaciers new meaning for many people who may previously have considered them eternally frozen, safely distant, and largely inert" (2005, Introduction). As such, Cruikshank contends, they become "a new kind of

endangered species" (Ibid). Klaus Dodds makes a similar point. He observes that where the 20th century Western attitude towards ice was principally bespoken by a "desire for mastery" over it, in the 21st century "we are more likely to think of cold places as indicative of rapid global climate change and planetary vulnerability" (Dodds, 2018, Ch.3). These new attitudes towards glaciers are, in a sense, precisely oppositional to the earlier ideas of the sublime. Where 19th century glaciers were understood as endangering and powerful, 21st century glaciers are understood as endangered and vulnerable.

Again, my interest is in finding evidence of climate breakdown in our second nature. As such, I am seeking evidence that the glaciers in our minds are melting. I present, as evidence, two complementary phenomena. The first consists of examples wherein the bisociation - the emergent polysemy - of the glacial metaphor is exploited rhetorically. I discovered this linguistic dynamic by studying instances in which the glacial metaphor was used in an article that also refers to literal glaciers. To find examples like this, I searched the LexisNexis news database (which contains more than 26,000 news sources from around the world[44]) for instances where the phrase "glacial pace" appears in the same article as the term "glacier(s)". Because the co-occurrence of metaphorical and literal glaciers is less common than the simple occurrence of the glacial metaphor, I was required to broaden my search beyond the two newspapers examined in the first section. For the same reason, I also broadened the temporal scope of my search for this section, including examples since 2000. By searching for co-occurrences of the phrase 'glacial pace' with the term 'glacier(s)', I sought to identify articles in which the glacial metaphor appeared, mixed or juxtaposed with discussion of literal glaciers. In all, this search produced 344 results. What I discovered in those results is that the glacial metaphor is now often employed as a sort of pun, ironically or in an inverted way. Moreover, these various uses ultimately rely on conceptual blends. Having identified some interesting examples of these phenomena, I performed targeted internet searches to identify further examples of each. I present some evidence of these rhetorical uses here, organized into four phenomena.

[44] LexisNexis (n.d.) *News and business content for BIS*. Available at: https://www.lexisnexis.com/en-us/products/news-and-business-content-for-bis.page

4.4.1 Not-so-glacial pace

The first category of linguistic creativity I identify is the idea of 'not-so' or 'un-' glacial pace. Clark Canfield, for example, writing for the *Associated Press* writes that "Two University of Maine scientists … have discovered that two glaciers in Greenland are moving at a not-so-glacial pace"[45]. Similarly, a piece in the *States News Service* describes the Barnes ice cap as retreating at "a not-so-glacial pace"[46]. The *Daily News*, meanwhile, in a short blurb for Jeff Orlowski's climate change documentary *Chasing Ice* describes it as a film about glaciers "vanishing at a not-so-glacial pace"[47]. Elsewhere, this same idea appears though under slightly different linguistic guises. In reference to the same film, the *Chicago Daily Herald* describes how it shows that "Ice is melting at an alarmingly un-glacial pace"[48]. Jeffery Selingo in the *New York Times* notes that "The glaciers in Glacier National Park are melting, and not at a glacial pace"[49]. In the same paper the headline for a piece by John Tagliabue states that the Rhone glacier is melting "but not at a glacial pace"[50]. There are examples, too, in the London *Times.* Roger Boyes, writing of Canada, remarks that "at somewhat faster than glacial pace, glaciers are beginning to melt"[51]. Elsewhere, a headline in the *Times* reads "Ice masses shrinking at far from glacial pace"[52]. There are plenty more examples besides these, though these suffice to illustrate the idea.

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[45] Canfield, C., (2005). 'University of Maine scientists discover glacier movement not so glacial', *The Associated Press State & Local Wire*, 31 July.
[46] States News Service, (2017). 'Last remnant of North American ice sheet likely to disappear in 300 years study finds current Arctic warming is almost unheard of in past 2.5 million years', *States News Service*, 20 March.
[47] Daily News, (2013). 'TV Watch', *Daily News (New York)*, 19 April, p. 8.
[48] Chicago Daily Herald, 2013. 'Coming Sept. 10', *Chicago Daily Herald*, 6 September, p. 42.
[49] Selingo, J., 2004. 'Going to Glacier? You Should Hurry', *The New York Times*, 7 May, Section F, p. 1.
[50] Tagliabue, J. (2006) 'Icy behemoth melting, but not at glacial pace; Rhone glacier could vanish this century', *International Herald Tribune*, 24 October, p. 2.
[51] Boyes, R. (2000) 'Swiss identity melts away with the ice', *The Times (London)*, 27 May, Overseas news section
[52] The Times (2021) 'Ice masses shrinking at far from glacial pace', *The Times (London)*, 29 April, ed. 1, Scotland, p. 20.

What emerges from these examples is the somewhat paradoxical notion of glaciers moving or changing at a non-glacial pace. On a purely literal level, of course, whatever pace glaciers move and change at is, by definition, glacial. What, then, are these writers doing? They are, I claim, leveraging the bisociation of glaciers, at least as they exist in the Western imagination. The figurative glaciers of the glacial metaphor are of the nineteenth century variety. Literal glaciers no longer behave in the same way. By describing glaciers as moving at a 'not-so-glacial' pace, these writers first produce a paradox: how can this be true? The paradox is resolved when we come to realise that climate breakdown has bisociated our notion of glaciers: that, without being directly aware of it, we hold in our heads two primary models of glacial dynamics, a nineteenth century model latent in the glacial metaphor and a twenty-first century model salient in discussions of climate breakdown.

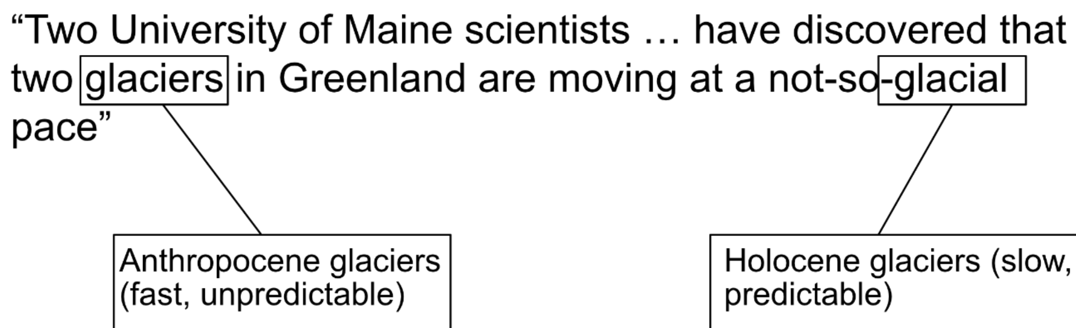

Figure 7: glaciers bisociated. Diagram constructed using quotation from (Canfield, 2005)

This rhetorical trick, of course, produces a Holocene - Anthropocene blend. In the paradoxical idea of glaciers moving at an un-glacial pace, we have two kinds of glaciers: Holocene glaciers and Anthropocene glaciers. The paradoxical idea of an un-glacial glacier blends them together in a way that helps to capture the uncanny realities of the Anthropocene cryosphere. This, in turn, produces a moment of Ghosh's recognition - what was taken for inert backdrop, for stable reference point, begins to shift.

4.4.2 Glacial bureaucracies and un-glacial glaciers.

Another version of the same essential paradox consists of instances in which writers use the bisociation of ‘glacial’ in an ironic way by describing international efforts at addressing climate change as proceeding at a ‘glacial pace’, even as they emphasise the speed at which actual glaciers are melting rapidly. *Conservation International* calls it “a terrible and terrifying irony that, while the efforts of the global community here are moving at a glacial pace, the world’s glaciers are now actually moving - or rather melting - even faster”[53]. Two letters to the editor - one to the *Financial Times* and one to the *New York Times* - capture and unpack the basis of this irony perfectly and, for that reason, are worth quoting in full:

Wanda Ballentine writes to the editor of the *Financial Times*:

> “Sir, In her article entitled "Climate change talks move at glacial pace" (June 13), I presume Fiona Harvey is referring to the pace at which glaciers used to move, as the pace at which they are currently moving is one of the reasons for said climate talks”[54].

Jeanne Fudala, meanwhile, writes to the *New York Times* that “The problem in a nutshell is that the term "glacial pace" now applies only to the administration in Washington, not to the glaciers![55]”

A targeted search for the term “ironically glacial pace” produces many examples of this sort. So, for instance, Roz Foyer, writing about the transition to renewable energy in Scotland, remarks, “the pace of change in energy appears ironically glacial when considered with the worsening of the environmental catastrophe across the world”[56]. Similarly, in a blog post on Greta Thunberg, agency *Despark* writes, “Sure, it’s easy to feel powerless about the powerful fossil fuel lobby and the (ironically)

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[53] Environment News Service (2012) 'Doha Outcome: Kyoto Protocol Lives, Global Climate Deal by 2015'. *Environment News Service*, 8 December. Available at: https://ens-newswire.com/doha-outcome-kyoto-protocol-lives-global-climate-deal-by-2015/ (Accessed: 12 March 2025).
[54] Ballentine, W.S. (2009) 'Gathering speed even as we speak'. *Financial Times*, 16 June, Asia Edition 1, p. 8.
[55] Fudala, J. (2007) 'Who's Glacial Now?', *The New York Times*, 5 May, Late Edition, p. 12.
[56] Foyer, R. (2024) 'Scots losing jobs as just transition goes backwards'. *The Herald*, 30 December. Available at: https://www.heraldscotland.com/politics/viewpoint/24820783.scots-losing-jobs-just-transition-goes-backwards/ (Accessed: 12 March 2025).

glacial pace of meaningful political action by the world's largest polluters"[57]. Or, as a final example, consider how Phillips and Rozworski state that "One of the rationales for a Green New Deal is that it replaces the ironically glacial market-based approach to decarbonisation with the greater efficiency of planning[58]. These are fleeting references to the 'glacial' metaphor. In them, however, they set up the use of the 'glacial' metaphor as ironic. Irony is notoriously difficult to define. One feature of virtually every definition of it, however, is that it relies on a basic idea of a "double-voiced discourse" (Virtanen, 2013). In other words, at the root of all irony is a gap between something as it appears and that same thing as it really is. This, of course, is a form of bisociation. In order for these writers to be able to off-handedly refer to a notion of 'ironically glacial pace', they must rely on the notion that their readers will be able to access the two layers of meaning they are playing with. They are relying, in other words, on the 'glacial' metaphor being bisociated.

What is remarkable about these examples is that they construct various institutions and processes as moving at a 'glacial pace' while simultaneously and paradoxically pointing out that glaciers themselves are not. These examples are leveraging an instance of climate breakdown in our second nature. In each case, the basic animating idea is to exploit an opening gap between the pace of real glaciers and metaphorical glaciers. The mechanism underlying these rhetorical effects, then, is bisociation. In effect, the metaphor is constructed as being grounded in the source domain of an older, vanishing model of glaciers. As a result, the metaphor is seen as a sort of lagging feature of an earlier world but one that we can, nonetheless, still access the meaning of. Figurative glaciers are seen to be out of sync with literal ones. Rhetorically, these writers are exploiting the gap that has opened between the two principal models of glaciers in order to produce the tension of a paradox. This paradox is then resolved in a sudden moment of insight or recognition.

The two preceding rhetorical tricks rely on the central conceit of producing a paradox in which glaciers are seen not to move at a 'glacial' pace. In these two examples,

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[57] Despark (2019) 'Is it right to fight climate collapse with technology?', *Despark Blog*, 4 October. Available at: https://despark.com/blog/is-it-right-to-fight-climate-collapse-with-technology (Accessed: 12 March 2025).

[58] Phillips, L. and Rozworski, M. (2020) 'Planning the Future', *Tribune*, 19 July. Available at: https://tribunemag.co.uk/2020/07/planning-the-future (Accessed: 12 March 2025).

then, the definition of the glacial metaphor is retained even as the source domain changes. The following two examples operate differently. In them, in various ways, writers suggest that the glacial metaphor is broken and needs either to be retired or redefined.

4.4.3 The broken glacial Metaphor

In some instances, writers treat the term 'glacial pace' as a kind of broken metaphor. To achieve this effect, they deploy the metaphor before undermining it by qualifying it in the context of melting glaciers. So, for example, Mark Ruskell, a Green Party member of the Scottish parliament is quoted by the *Press Association* criticising the government for its "glacial pace" in implementing a deposit return scheme. He says "I really feel progress on this has been glacial … though maybe that is a bad metaphor given glaciers are melting faster these days"[59]. In a report on climate negotiations at COP29, the Future Economy Forum, in a similar way, states that "the language inside the negotiations was sterile, the pace is glacial (although as 30 million tons of ice melt per hour we might need to review that expression)"[60]. In these cases each author uses the metaphor in its conventional sense before undermining it. Interestingly, however, in undermining it, (s)he does not undermine his point but, instead, underscores the urgency with which green policies must be enacted.

This same phenomenon - deploying the metaphor before undermining it - occurs beyond climate discourse. This perhaps suggests that the metaphor feels genuinely anachronistic for some writers - it is not simply a rhetorical trick for those communicating climate change. British Columbia's *North Shore News* provides an example of this when it says "West Vancouver is slow, even by municipal standards. We'd say they move at a glacial pace, but scientists are alarmed at the rate glaciers

[59] Davidson, G. (2020) 'Government "dithering" over bottle return scheme say Greens'. *The Scotsman*, 29 April. Available at: https://www.scotsman.com/health/coronavirus/government-dithering-over-bottle-return-scheme-say-greens-2553926 (Accessed: 12 March 2025).
[60] Dols, M. (2024) 'COP29: Weaving a tapestry of climate action by shifting the focus from negotiation to empowerment', *Future Economy Forum*, 26 November. Available at: https://futureeconomy.forum/empowerment-at-cop/ (Accessed: 12 March 2025).

are receding"[61]. William Watson writing in the *Ottawa Citizen* provides another example. Writing about the Canadian justice system, he writes that it "grinds along at what must seem to the participants like a glacial pace (if that's still the right simile, since glaciers are moving so much more quickly than they used to)"[62]. Finally, Brent Mazerolle in the New Brunswick *Times and Transcript* says "It would be tempting to describe Moncton's pursuit of a multi-purpose downtown events centre as moving at a glacial pace, except that glaciers have been picking up speed lately"[63]. Interestingly, these three non-climate specific examples are all from Canadian publications: perhaps in Canada, a largely English-speaking country and home to a significant percentage of Earth's glaciers, the 'glacial' metaphor is more conspicuously anachronistic than it is elsewhere. In all of these cases, by deploying the 'glacial' metaphor before undermining it, the writers succeed in both using it to make the conventional speed comparison and, simultaneously, in jolting us into the realization that climate breakdown is impacting on the very benchmarks around which we organize our language.

Fundamentally, where this phenomenon is used as a rhetorical trick, it relies, like the other examples, on bisociation. In effect, the 'glacial' is re-grounded in the source domain of contemporary glacial dynamics and, as such, is seen to be out of step.

4.4.4 Re-defining Glacial Pace

Finally, some writers rhetorically suggest that changes in glaciers mean that the meaning of the term 'glacial pace' has been transformed, sometimes even into the opposite of its original meaning. Sometimes this takes the form of simple, literal observation. Sneha Johari, for example, writing in New Zealand's *Southland Times* writes that, upon seeing the Fox Glacier, she "wanted to tell everyone that 'glacial

[61] North Shore News (2018) 'Editorial: Slow business', 7 February. Available at: https://www.nsnews.com/opinion/editorial-slow-business-3067084 (Accessed: 12 March 2025).
[62] Watson, W. (2009) 'What do lawyers do for $2 million?', Ottawa Citizen, 26 May, Final Edition, p. A17.
[63] Mazerolle, B. (2011) 'Events centre progress continues; Moncton council provides Ottawa with more information for funding application', The Times & Transcript (New Brunswick), 28 June, MAIN section, p. A1.

pace' had lost its original meaning"[64]. Similarly, a piece in *Technology Times* about the rapid loss of ice from the Greenland ice sheet states that "The meaning of the phrase 'glacial pace' has changed"[65]. Twila Moon, meanwhile, a glacier researcher at the University of Washington is quoted in the *Associated Press* as saying that "'Glacial pace' is not slow anymore"[66]. Dominique Browning makes the same point in the *New York Times*: she recalls watching an iceberg calve off a glacier in Patagonia with her teenage niece. She recounts how her niece quipped, "I guess this gives new meaning to 'a glacial pace'"[67]. In all of these cases, contemporary glacial dynamics are seen to undermine the meaning of the metaphor. These examples are less about bisociation than the simple observation of climate change in second nature.

Other, similar, instances, though, are based on bisociation. In these examples writers, writers imagine new definitions for the term 'glacial pace' based on contemporary glacial dynamics. Gary Thompson, for example, in the *Philadelphia Daily News* writes that "To proceed at a glacial pace nowadays means to move backwards at a rapidly accelerating rate"[68]. Likewise, a *Think Progress* article is headlined, "Glacial Pace Now Means Very Very Fast"[69]. In a blog post on the 2014 Bonn climate talks, meanwhile, Irene Qualie writes, "climate negotiations are moving, as one of the experts said to me at the meeting "at a glacial pace". As we can see in Antarctica, though, and Greenland and other regions, those glaciers are speeding up. Maybe there is hope for the climate talks yet!"[70]. Here, Quaile effectively imagines the meaning of the phrase 'glacial pace' changing - accelerating - in a sort of sympathy with the accelerated melting of real glaciers. Rob Nixon, finally, as previously mentioned, recalls how in 1988, his PhD advisor rebuked him for

[64] Johari, S. (2024) 'Enjoy our big Kiwi backyard, but you can skip Queenstown', The Southland Times (New Zealand), 27 April.
[65] Technology Times (2023) 'Countries gather to finalize evaluation of Paris Climate Agreement', *Technology Times*, 10 June.
[66] Borenstein, S. (2012) 'Greenland losing ice fast, but not runaway pace', *The Associated Press*, 3 May, 07:13 PM GMT, Washington Dateline.
[67] Browning, D. (2008) 'The melting point', *The New York Times*, 2 February, Late Edition - Final, Section A, p. 19.
[68] Thompson, G. (2012) 'Not a pretty picture: Chasing Ice exposes climate change', *The Philadelphia Daily News*, 30 November, Features section, p. 39.
[69] The Brad Blog (2015) ''Green News Report' - August 13, 2015', *Newstex Blogs: The Brad Blog*, 13 August, 8.
[70] Quaile, I. (2014) 'Polar Ice at UN Bonn Climate Talks', *DW Blogs*, 13 June. Available at: https://blogs.dw.com/ice/index.html%3Fpaged=21.html (Accessed: 12 March 2025).

“proceeding at a glacial pace” with his dissertation. Nixon goes on: “if I repeated my advisor’s admonition on a dissertation today, the student might assume that I was rebuking them for writing too darn fast”[71]. In all of these examples, writers form Holocene-Anthropocene blends. The linguistic structure of ‘glacial pace’ is retained, as is the basic notion of using glaciers as a reference point for speed. Instead, however, of drawing on the nineteenth century model of glaciers previously discussed, these writers essentially re-ground the ‘glacial’ metaphor in the source domain of twenty-first century, Anthropocene glaciers. The result is that the term’s meaning not only changes but, in fact, is flipped outright into its opposite. These writers playfully imagine that climate change’s impacts in primary nature (e.g. the melting of the cryosphere) naturally carry over into second nature and, as such, unmoor the glacial metaphor from its Earthly anchor point.

These four categories of creative linguistic play together demonstrate a dynamic: wherever Western culture has taken-for-granted and backgrounded an element of nature as having a timeless and stable meaning, climate change threatens to upset this long-standing association. Where these redefinitions occur, there is scope for writers - and cartoonists, comedians etc. - to leverage these moments of bisociation to produce uncanny rhetorical effects. As this PhD research shows, this is of key importance for the potential directions of effective climate communications.

4.5 The New Glacial Metaphor

The ‘glacial’ case study provides further evidence of climate breakdown in second nature. In the previous section, the emergence of a new Anthropocene conception of glaciers is deployed in conceptual blends to make the familiar - the conventional metaphor - strange. In this section, I look at the other side of the same dynamic. Here I provide evidence of the emergence of a new Anthropocene ‘glacial’ metaphor. This new glacial metaphor uses as its referent, as its source domain, not the familiar construction of Holocene glaciers, but, instead, the figure of the Anthropocene

[71] Nixon, R. (2015) 'The swiftness of glaciers: language in a time of climate change', *Aeon*, 13 August. Available at: https://aeon.co/ideas/the-swiftness-of-glaciers-language-in-a-time-of-climate-change (Accessed: 12 March 2025).

glacier. The previous section was about the sun setting on an old Holocene metaphor, this section is about the sun rising on a new Anthropocene one. In this section, I therefore present evidence for a new, previously undocumented glacial metaphor.

Because this metaphor is novel and emerging, I have had to take a somewhat different approach with data collection than in the previous two sections. Because the metaphor is not yet formalised in the way that ‘glacial pace’ has been - to the point of cliché - I have had to look beyond journalistic contexts and into more informal, vernacular linguistic settings such as online interactive forums and blog-style posts. That is not to say that this new metaphor does not occur in more formal journalistic settings - it does, and I include examples of that. Previous scholarship has, though, demonstrated the value of sources like forum posts for documenting instances of linguistic innovation and for examining emerging and authentic trends in everyday language use (see, for example, Castaño, 2023, Nuttall and Harrison, 2022). What I present here is evidence of an entirely new ‘glacial’ metaphor. It is a metaphor grounded in the source domain of twenty-first century, Anthropocene glaciers and whose meaning and emotional valence is derived from Western understandings of glaciers in the era of climate breakdown. Because it is emergent and novel, it has not yet coalesced into conventional forms (in the way that ‘glacial’ produces stock phrases like ‘glacial pace’ and ‘glacial progress’). As such, the metaphor appears in a number of parallel linguistic guises. These versions are, though, essentially synonymous with one another and, taken together, can be read as a single overarching and new metaphor. In the following section, I provide examples of the metaphor before considering its meaning and what it says about the wider Western conception of ice in the Anthropocene.

I will begin with some of the more formal examples. A good journalistic example of this metaphor appears in the *New York Times* where Dwight Garner is lamenting contemporary book criticism. He says, “What we need more of, now that newspaper book sections are shrinking and vanishing like glaciers, are excellent and

authoritative and punishing critics"[72]. Similarly, writing in the *Guardian* about Italian demography and Italy's falling birthrate, Angela Giuffrida states that without an influx of new young students, "Italian schools are vanishing like the melting glaciers"[73]. In the *Independent,* meanwhile, as part of a debate about the UK tv licence, one commentator bemoans what they see as a decline in the BBC's offering. They say "Sports are disappearing [from the BBC] faster than the glaciers"[74]. As a final journalistic example, *Reuters* argues that "baseball's leisurely flow has fallen out of step" with "a world where attention spans are shrinking like glaciers"[75]. In all of these cases, glaciers are used as a reference point for something in decline and on the brink of disappearing.

Beyond these journalistic examples, the metaphor appears in more informal, forum-type settings. In a forum discussion about second-hand bookshops, for example, one poster remarks that "book stores are disappearing like glaciers. I am trying to see as many as I can before they're all gone"[76]. In a boating forum, meanwhile, a contributor looking for help in getting cast aluminium replacement windows for his boat is told that "the patternmakers who would knock that out for you in an hour are all dead". Another contributor reaffirms this point and says: "Truly skilled and competent people are disappearing faster than the glaciers. They are being replaced with computer-obsessed button-pushers"[77]. At the risk of it becoming repetitive, I list below some more examples from forums, blogs and customer reviews. I do this because, as I will demonstrate afterwards, an interesting pattern emerges:

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[72] Garner, D. (2012) 'Not everyone gets, or deserves, a gold star', The New York Times, 19 August, Section MM, p. 42.
[73] Giuffrida, A. (2023) ''Vanishing like glaciers': plunging birthrate threatens Italian schools', The Guardian, 1 May, Section: World News. Available at: https://www.theguardian.com (Accessed: 12 March 2025).
[74] Independent (2023) 'Independent readers discuss whether BBC TV licence is good value for money as fee set to rise', The Independent, 8 December, Section: Home News, UK. Available at: https://www.independent.co.uk (Accessed: 12 March 2025).
[75] The Nation (2015) 'Five story lines to watch this baseball season', The Nation (Thailand), 4 April.
[76] warpus (2017) 'Random Raves XLI: One More Trip Around the Sun!', CivFanatics Forums, 10 June. Available at: https://forums.civfanatics.com/threads/random-raves-xli-one-more-trip-around-the-sun.616934/page-5 (Accessed: 12 March 2025).
[77] on the border (2018) 'Foundry/metal fabrication', WoodenBoat Forum, [online] Available at: https://forum.woodenboat.com/forum/building-repair/225718-/page2#post7067856 (Accessed: 12 March 2025).

- In a review of Cynthia Simmon's novel *Wrong Kind of Paper* - which tells the story of a small-town local newspaper reporter in late 1980s Indiana - Linda F., a customer, writes, "We need small town newspapers to keep local government accountable and they are disappearing faster than the glaciers"[78].
- In *Etiquetteer*, an etiquette blog whose strapline reads "Encouraging Perfect Propriety in an Imperfect World since 2001", blogger Robert Dimmick laments the casualization of professional dress codes. He claims that the formality of the suit and tie in the workplace is "fading faster than the glaciers of Greenland"[79].
- In photography blog Japan Camera Hunter, Michael Nguyen reviews a kit for developing film photographs at home. In its first line, he says, "It is no secret that photo labs are disappearing like arctic glaciers"[80].
- In a blogpost about Labour Day, gardening blogger George Ball writes, "For some, "labour" denotes unions like the UAW and Teamsters; but the American labour union is now an endangered species, vanishing faster than an Arctic glacier."[81]
- In another gardening blog Val Bourne laments how it is becoming more difficult to find certain unusual cultivars because, as she puts it, plant "nurseries are melting away like the glaciers"[82].
- In an automotive blog, meanwhile, Matt Davis warns enthusiasts to stock up on certain kinds of engine. "Those obsessed with engine cylinder capacity would be wise to hoard now because the sixes and eights are vanishing like glaciers into the Baltic,"[83] he writes.

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[78] Linda F. (2021) 'The only issue with this book is I want to read a sequel - now...', Amazon, [online] Available at: https://www.amazon.co.uk/Wrong-Kind-Paper-Cynthia-Simmons/dp/1620064944 (Accessed: 12 March 2025).
[79] Dimmick, R. (2021) 'The Depths of Chivalry', Etiquetteer, Vol. 20, Issue 19, [online] Available at: https://www.etiquetteer.com/columns/2021/3/14/chivalry-vol-20-issue-19 (Accessed: 12 March 2025).
[80] Nguyen, M. (2021) 'Review: Cinestill CS41 Powder Kit and Lab-Box', Japan Camera Hunter, [online] Available at: https://www.japancamerahunter.com/2021/03/review-cinestill-cs-41-powder-kit/#:~:text=It%20is%20no%20secret%20that,and%20efficient%20cost%20cutting%20solution (Accessed: 12 March 2025).
[81] Ball, G. (2009) 'The Labor Days of Our Lives', Fordhook Voice, [online] Available at: https://fordhookvoice.com/2009/09/the-labor-days-of-our-lives/ (Accessed: 12 March 2025).
[82] Bourne, V. (2019) 'What's in a Name', Hartley Magazine, [online] Available at: https://hartley-botanic.ie/magazine/whats-in-a-name/ (Accessed: 12 March 2025).
[83] St-Pierre, M. (2011) '2012 Hyundai Genesis 5.0 R-Spec Review', Auto123, [online] 13 December. Available at: https://www.auto123.com/en/news/2012-hyundai-genesis-50-r-spec-review/55148/ (Accessed: 12 March 2025).

What emerges from these examples - and there are many more - is a new glacial metaphor. The cases quoted are, of course, all similes but, as per the *Oxford Companion to the English Language*, simile is a species of metaphor. This new glacial metaphor has a coherent meaning. It refers to a kind of nostalgia for a lost world. In all of the preceding examples, glaciers are used as referents for this nostalgia. The loss of glaciers is equated with the loss of an old, often analogue or pre-digital, world of real book stores, film photography and local newspapers. Whereas in the traditional 'glacial pace' metaphor, 'glacial' is used to refer to institutions and individuals that are intransigent holdovers from a previous age, the new 'glacial' metaphor constructs glaciers as endangered and waning symbols of a previous era. Consider, for example, the difference between the following two examples of metaphorical glaciers. In the first, which appears in the *Irish Times,* former Catholic Archbishop of Dublin Diarmuid Martin accuses the church of "dragging their feet" on divesting from the patronage of schools. Journalist Carl O'Brien characterises the progress on divestment as "glacial"[84]. The metaphor, here, then, is used to characterise an intransigence: an organisation fighting to hold onto its historical power and straining against changes in the status quo. In contrast, in a blogpost for the UK energy technology company Ergoe, Peter Cross writes about a near future in which a large proportion of homes will generate their own electricity via solar and wind equipment and, in turn, be in a position to sell excess power to other users or back to the grid. In this scenario, Cross writes, "The utility companies are certainly not going to melt away, like glaciers in an ever warmer world"[85]. In other words, Cross is pointing out that those benefiting financially from the current system will find a way of holding onto that advantage in a new paradigm. Here, as is the Catholic church example, entrenched power holds on, intransigently, as the world changes. In the Catholic church example, though, glaciers are used to illustrate this holding on. In the utility companies example, on the other hand, glaciers are constructed as precisely opposite to this kind of holding on. The new glacial metaphor is used to illustrate not just a different phenomenon, but an opposite one.

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[84] O'Brien, C., (2018). 'Church control of education out of step with society; While our school population has changed since the last papal visit, much of the system remains the same', The Irish Times, 24 August, p. 4.

[85] Cross, P. (2016) 'A peek at the future?', Ergoe Energy, 23 April. Available at: [URL] (Accessed: 12 March 2025).

Where before, to be intransigent and obstructive was to be glacial, now that is precisely the opposite of ‘glacial’.

This novel glacial metaphor accords with the new twenty-first century meanings of ice mentioned earlier. Recall how Knight and Cruikshank remark that, in the twenty-first century, glaciers in the West come to be thought of as a kind of “endangered species” (Knight, 2019, Ch.1) and in terms of “planetary vulnerability” (Cruikshank, 2005, Introduction) . The new glacial metaphor is bespoken by ideas of recession into the past, whereas the old one was all about (slow) inexorable momentum towards the future. The existence of this metaphor underscores the sense in which we stand today at a truly epochal threshold moment. We live in a time when it is perfectly possible to refer to something as moving at a glacial pace and be understood in the conventional sense of that phrase. At the same time, a writer can describe a glacier as moving at an un-glacial pace and have that make sense too. Finally, it is, evidently, possible to refer to something as ‘vanishing like a glacier’ and for that, too, to make sense. This whole network of meaning is possible, ultimately, because glaciers have, in the West, been culturally bisociated.

Before moving on to the next chapter in which I consider how such bisociations can be leveraged for climate communication, it is important to emphasize that the phenomenon I outline in respect of the ‘glacial’ metaphor is by no means unique. I will briefly outline one more clear example here so as to demonstrate some of the potential variance.

4.6 Venicification

Travel writer Richard Mellor refers to a phenomenon he terms “Venicification” (Mellor, 2010). This, he explains, is the practice of referring to other towns and cities around the world as ‘the Venice of’ the north, west, south, of the Americas etc. For example, Wikipedia lists 37 cities nicknamed ‘the Venice of the north’[86] and 44 cities

[86] *Wikipedia* (2025) 'Venice of the North'. Available at: https://en.wikipedia.org/wiki/Venice_of_the_North (Accessed: 12 March 2025).

nicknamed ‘the Venice of the East’[87]. There are at least two cities, Ganvie[88] and Saint-Louis[89], that are referred to as ‘the Venice of Africa’., while Guyana, Brazil and Argentina are all said to be home to a ‘Venice of South America’. Annecy is said to be the ‘Venice of the Alps’[90], while Fort Lauderdale is said to be the ‘Venice of America’[91]. In total, hundreds of settlements around the world are known by this sobriquet.

In many cases the affective valence of the phrase is neither particularly positive nor negative: it is simply a marker of the fact that a settlement is organised around central waterways, often canals. Where, however, there is a sense of evaluation, the comparison with Venice is clearly intended as a flattering and promotional one. These various ‘little Venices’ are, for instance, often constructed as ‘jewels’, ‘gems’ and ‘treasures’. Bruges, for example, is said to be “called ‘the Venice of Belgium’” and “is hailed by artists and poets as a precious pearl”[92]. It is described as “a mediaeval jewel”[93]. A headline in the *Daily Express* newspaper, meanwhile, characterises the southern French town of Sete like this: a “‘Hidden gem’ city [that] is ‘France’s answer to Venice’ with quaint boats and affordable wine”[94]. Suzhou, meanwhile, called “the Venice of China” is described as a “national treasure”[95], while Giethoorn, the “Venice of the Netherlands” is referred to as a “tiny treasure in the

[87] Wikipedia. (2025). ‘Venice of the East’. Available at: https://en.wikipedia.org/wiki/Venice_of_the_East [Accessed 13 Mar. 2025].
[88] Wikipedia. (2025). Ganvie. Available at: https://en.wikipedia.org/wiki/Ganvie [Accessed 13 Mar. 2025].
[89] The Economist. (2024). ‘The Venice of Africa is sinking into the sea’. Available at: https://www.economist.com/middle-east-and-africa/2024/06/24/the-venice-of-africa-is-sinking-into-the-sea [Accessed 13 Mar. 2025]
[90] Gallant, P. (2023). ‘Exploring Annecy: The Venice of the French Alps’. *Bold Traveller*. Available at: http://boldtraveller.ca/travel-inspiration/exploring-annecy-the-venice-of-the-french-alps/ [Accessed 13 Mar. 2025].
[91] American Sky. (2025). ‘Fort Lauderdale: The Venice of America’. Available at: https://www.americansky.ie/florida-holidays/south-gold-coast/fort-lauderdale/fort-lauderdale-the-venice-of-america [Accessed 13 Mar. 2025].
[92] Artepura. (n.d.) ‘Arte Pura meets Brugge: The pearl of Flanders.’ Available at: https://artepura.it/en/arte-pura-meets-brugge-the-pearl-of-flanders (Accessed: 16 March 2025).
[93] Ibid
[94] Bosotti, A. (2024) ‘The charming European village dubbed 'France's answer to Venice'. *Daily Express*. Available at: https://www.express.co.uk/travel/europe/1936445/charming-european-village-france-venice (Accessed: 16 March 2025).
[95] Sekita EkreK. (n.d.) ‘Discover Suzhou, China’. Available at: https://www.sekitaekrek.com/blog/discover-suzhou-china (Accessed: 16 March 2025).

northeastern Dutch province of Overijssel"[96]. Examples like this go on. Venice in this trope, then, as well as denoting the presence of waterways, is used as a byword for architectural marvel and rich cultural heritage. Venice is constructed as a special place comparison with which is inherently flattering. In forthcoming research, Stephanie Malia considers ways in which Venice becomes "a symbolic geography appropriated by cities across the Americas, Europe, and Asia"[97]. Mellor, meanwhile, who refers to the practice of referring to other places as versions of Venice as 'Venicifcation', considers it a public relations tactic used to promote anywhere "with a few canals and some quaint corners"(Mellor, 2010) . In any case, the comparison is meant as a positive, promotional one.

Venicification is an example of a kind of metaphorical linguistic construction identified by Gilles Fauconnier and Mark Turner as the "XYZ construction" (Fauconnier and Turner 2002, p.147). In these kinds of constructions, X is said to be the Y of Z. As example, they provide "necessity is the mother of invention" (Ibid, p.155). In the case of Venicification, a statement like 'Amsterdam is the Venice of the North' fits this structure. Clearly, what occurs in these metaphorical XYZ statements is that X and Z are understood in terms of Y. Or, in other words, Y is the reference point for understanding X and Z. In Venicification, then, Venice is the reference point for an understanding of these other settlements. More particularly, though, it is not simply Venice but, to return to Coulson, a particular "cultural model" of Venice that is serving here as the reference point (Coulson, 2006). Again, for Coulson, cultural models are "idealized cognitive models of sociocultural phenomena" which are "widely shared by culture members" (Ibid p.187). The cultural model of Venice tapped into by this XYZ construction is Venice as described by UNESCO: "an extraordinary architectural masterpiece"[98] - a historical treasure famous for its canals

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[96] Cohn, L. (2024) This Village AKA The 'Venice Of The Netherlands' Near Amsterdam Is Perfect For A Fairytale Vacation'. *Travel + Leisure Asia*. Available at: https://www.travelandleisureasia.com/global/destinations/europe/giethoorn-is-called-the-venice-of-the-netherlands/ (Accessed: 16 March 2025).

[97] Malia in Chapman University. (2024) '/Windows to Italy'. *Ferrucci Institute*. Available at: https://www.chapman.edu/wilkinson/research-centers/ferrucci-institute/windows-to-italy/index.aspx (Accessed: 16 March 2025).

[98] UNESCO, (2002). The whole of Venice is considered an outstanding universal value. [online] Available at:

and gondoliers. This, no doubt, is the principal Western, even global, cultural model of Venice.

Climate breakdown, however, is changing this. Because of its layout on a Lagoon, Venice is particularly vulnerable to climate breakdown and, specifically, to the effects of sea level rise. Current predictions suggest that large parts of the city will be permanently submerged by 2150 (Euronews, 2024). Flooding, while always a feature of life in the city, has become more frequent and severe in recent years. The west side of the city, for instance, flooded almost 60 times between 2019 and 2023 (Ibid). In 2023, meanwhile, UNESCO recommended that Venice be added to a list of endangered heritage sites (Buckley, 2023). As a result of this, a new cultural imaginary or cultural model of Venice has taken shape. This is the cultural model of Venice as a sinking city or as a place in distress. Once shorthand for culture and heritage, Venice is now shorthand, too, for climate vulnerability and loss.

In this context, I return to the XYZ construction 'X is the Venice of Y'. Interestingly, I found several examples of this metaphorical construction that appear to use this latter, Anthropocene, cultural model of Venice as their reference or anchoring point. I include five examples here to illustrate:

Table 2: Venicification

Place compared to Venice	Quote
Penang, Malaysia	Yesterday was another watery disaster for Georgetown, where after over an hour of downpour from 4.30pm, Penang was again transformed into the Venice of the East.[99]
Freemantle, Australia	Fremantle's historic West End is becoming the "Venice of the south" with

https://whc.unesco.org/archive/websites/venice2002/general/venice.htm#:~:text=The%20whole%20of%20Venice%20is%20considered%20an,on%20the%20World%20Heritage%20List%20in%201987
[99] Ker, T. L. (2017) 'Will Kit Siang remind his son of 'Penang and Venice of the East'?. *Malaysiakini*. Available at: https://www.malaysiakini.com/news/401510 (Accessed: 16 March 2025).

	water seeping into basements of buildings because of rising sea waters[100].
Hull, England	Hull could become the Venice of the North, say country's top architects, as they outline plans to cope with rising sea levels[101]
Galveston, Texas	Galveston will soon become the "Venice of the South" thanks to climate change[102]
Washington DC, U.S.A.	Add to this the higher tides expected as a result of global warming and Washington is well on its way to becoming the Venice of the eastern American seaboard[103]

These are just five examples of many more. In them, however, Venice becomes a referent not for cultural heritage or architectural elegance but, instead, for endangerment and loss. Instead of being a standard towards which various towns and cities strive in their marketing materials, Venice is constructed as a degraded state into which other towns and cities might devolve. To be clear, the traditional

[100] Foster, B. (2016) 'Freemantle's West End becoming 'Venice of the South' with rising sea waters'. *WAToday*. Available at: https://www.watoday.com.au/national/western-australia/fremantles-west-end-becoming-venice-of-the-south-with-rising-sea-waters-20160830-gr4iqh.html (Accessed: 16 March 2025).
[101] Alleyne, R. (2010) 'Global warming could turn Hull into the Venice of the North'. *The Telegraph*. Available at: https://www.telegraph.co.uk/news/earth/earthnews/6989103/Global-warming-could-turn-Hull-into-the-Venice-of-the-North.html (Accessed: 16 March 2025).
[102] Gray, C. (2024) 'Galveston sea levels rising faster than almost anywhere else, study finds'. *Houston Chronicle*. Available at: https://www.chron.com/gulf-coast/article/galveston-rising-sea-levels-venice-19441565.php (Accessed: 16 March 2025).
[103] Rock Collector. (2015) 'Washington under water – the strange case of the sinking Capitol'. Rock *Collector Blog*. Available at: https://www.rockcollector.co.uk/editorial0715.htm#google_vignette (Accessed: 16 March 2025).

version of the Venice trope - in which the comparison is favourable - continues to be deployed today. Nonetheless, alongside it, there is this second unfavourable version of the trope in which the comparison is not flattering but, instead, constitutes a grim diagnosis. Venice itself, because of the danger it is in from rising sea levels, has come to have a second cultural meaning. This new meaning does not, however, simply undercut or undermine the meaning of the traditional Venicification trope. Instead, it provides a source domain for a new, competing version.

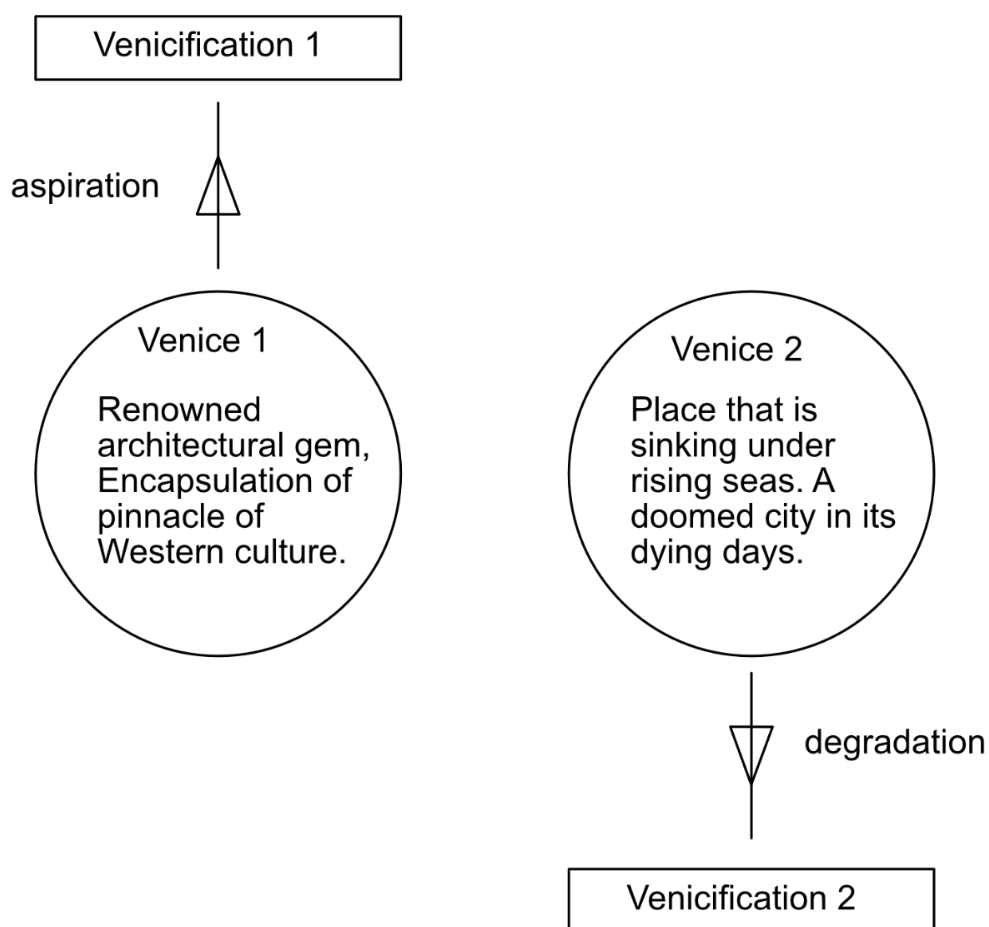
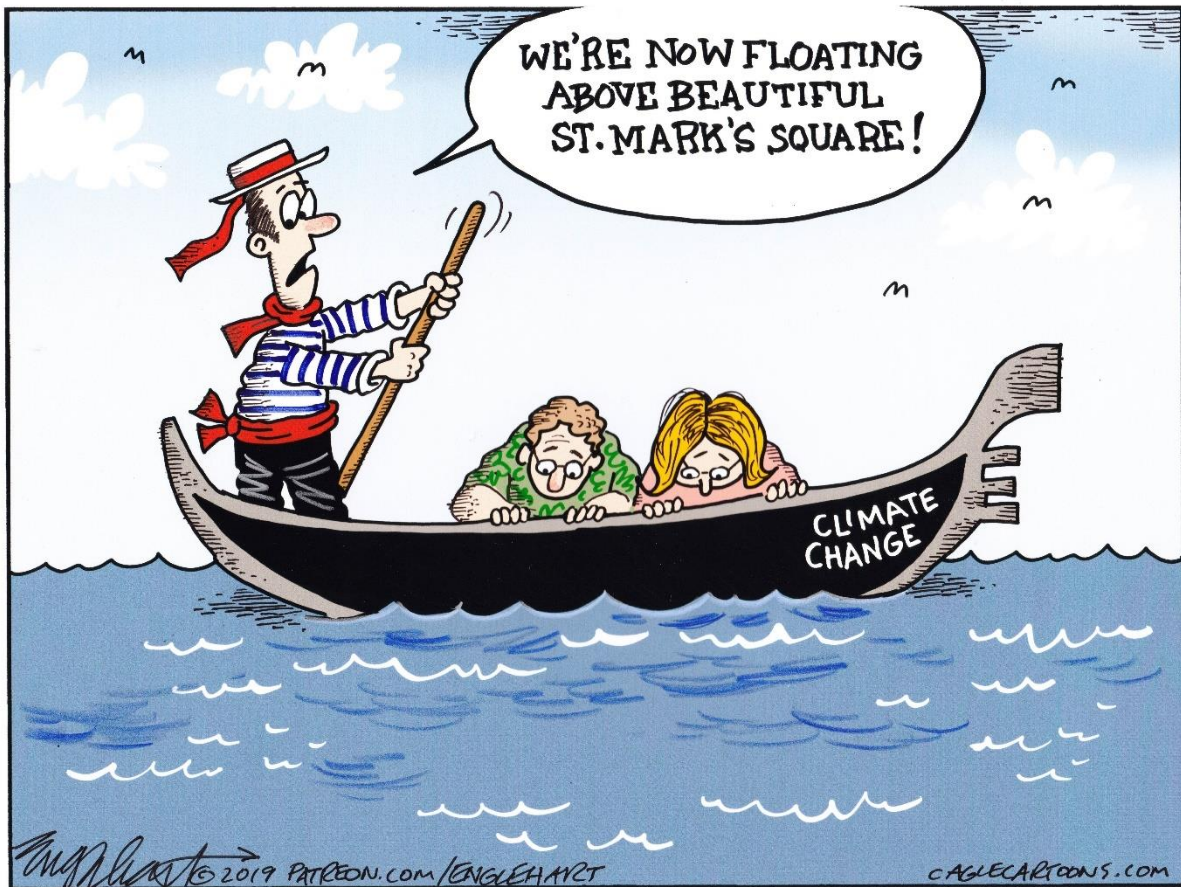


Figure 8: Venicification diagram

There are, then, currently in circulation, two versions of the Venicification trope. For ease and clarity, we might refer to the traditional version as the Holocene Venicification trope and the novel, post-climate breakdown version, as the

Anthropocene Venicification trope. Comparing and contrasting these versions of the Venicification trope yields interesting insight into this phenomenon. At the most basic level, the two versions share a fundamental structure and meaning. To say that X is the Venice of Y is, in both cases, to say that X is a city with waterways where in other cities one would find roadways. However, there is a fundamental difference in emotional valence between the two. In the first, comparison with Holocene Venice presupposes that a city likely wants to be like Venice. In the second, the comparison with Anthropocene Venice, the presupposition is that a city wants to avoid becoming like Venice. There is Holocene Venice as an elevated state towards which other towns and cities might strive and Anthropocene Venice, a devolved state into which other towns and cities might sink. Once again, both of these metaphors co-exist today. Moreover, as in the case of 'glacial', the two can be blended in order to produce Holocene-Anthropocene blends that manage to be simultaneously absurd and insightful. This cartoon which appeared in the *Denver Post* is a good example. Through the gondolier, it refers back to an old Romantic image of Venice. The notion of floating over rather than through Venice, however, provides a reference to Anthropocene Venice as it sinks and disappears.



[104]

Figure 9: Venice blend

4.7 Conclusion

In this chapter, I have sought to demonstrate how climate breakdown can produce a situation in which an element of culture is bisociated. I have suggested that climate breakdown produces a situation in which there are effectively two concurrent (Western) cultural models of glaciers in circulation. I have demonstrated the same phenomenon in the case of the metaphor of Venicification. Next I have shown that these two versions of a metaphor can be used, as with Rush and her notion of passwords, as portals between Holocene and Anthropocene. As such, they compress into a single unit of culture two entire climatological contexts. This

[104] Englehart, B. (2019) *Venice Flooding* [cartoon] 18 November. Available at: https://www.cartoonstock.com/cartoon?searchID=EC372117

bisociation can be used to produce blends which allow us to gain a global insight on some element of climate breakdown in a compressed and compelling way.

In the next chapter, I focus more specifically on the promise of these instances of bisociation for climate communication. I examine a number of instances of professional climate communication which are ultimately animated by bisociation and operate as conceptual blends.

4.8 Coda

As mentioned, throughout this project, I have been engaging in communications practice as a way of more fully engaging with the ideas presented in it. Linda Candy conceives of Practice Based Research as a matter of turning concepts into artefacts (2006). There is real value in this kind of work. Knowing through making offers access to a different kind of knowledge than is accessed through more traditional forms of inquiry. In an academic context, practice based research contributes to achieving a project’s overall research objectives and answering its research questions through the production of a creative artefact. In this project, I engaged in practice in order to more fully understand the contours and potentialities of the concepts under discussion.

In this section, I present one such piece of practice based on this notion of the bisociation of the glacial metaphor. The bisociation of the glacial metaphor is at the root of the idea explored in this piece of communications practice. This piece takes the form of a short climate comedy animated video. I made it as entry to University of Colorado at Boulder’s annual Inside the Greenhouse climate comedy video contest. This contest is organized and run by climate communications specialists Max Boykoff and Beth Osnes-Stoedfalke.

I intuitively felt that the kind of bisociation involved in the case of the glacial metaphor as outlined had real comedic potential. This intuition is supported by the literature on humour. William Beeman, for instance, in his classic account of humour, demonstrates the degree to which it relies on a kind of basic bisociation. Beeman

describes humour as consisting in a communicative actor presenting a message "within a cognitive 'frame'" (1999, p.103). The actor then "suddenly pulls this frame aside, revealing one or more additional cognitive frames which audience members are shown as possible contextualizations or reframings of the original content material" (Ibid) For an instant, the two frames co-exist in tension, as a paradox. This paradox is then resolved as the audience moves from the original primed frame into the novel surprising but logically consistent one. This resolution provides a moment of release experienced as a smile, amusement and (sometimes) laughter. Beeman goes on to explain that the key to producing effective paradoxes is to skilfully leverage the audience's tacit, taken-for-granted knowledge. Beeman writes that "a large part of the comic effect of humour involves the audience's taking a set interpretive frame for granted and then being surprised when the actor shows their assumptions to be unwarranted as the moment of dénoument" (Ibid, p.104).

The bisociation of the glacial metaphor lends itself to Beeman's model of humour. The phrase, as already discussed, contains within it tacit, taken-for-granted assumptions about the environment. Because, moreover, the metaphor has reached the level of cliché, these tactic assumptions are essentially invisible to the audience. This, then, the phrase's conventional understanding, constitutes the first, taken-for-granted frame in which I first present this phrase in this piece of practice. I imagine a near-future situation in which a senior colleague is emailing another more junior one in a professional setting. The senior colleague explains that payments are moving 'at a glacial pace' because the accounts department is 'snowed under' with work. The audience is encouraged to (at first) take this at face value.

Then, however, I reveal the second interpretive frame. I imagine an automated email plugin which 'translates' phrases like 'glacial pace' or 'snowed under' for younger, more junior colleagues more attuned to the Anthropocene environment. 'Glacial pace' is glossed: glaciers were not always as fast and erratic as they are now. In effect, I reground the metaphor in the contemporary context of Anthropocene glaciers. In doing so, as per Beeman, I show the audience's assumptions to be unwarranted. The characters of the senior colleague and the junior one serve to create two input spaces – a Holocene and an Anthropocene space. The text of the email serves as a blend of the two. The email has a conventional, taken-for-granted

Holocene meaning as a drab bit of corporate administrative communication. I show, however, that it also has a second surprising Anthropocene meaning as a sort of record of the ways in which the world has changed. The imagined AI assistant – the email plugin – who I name Thawsaurus, alternates between the two worlds and brings them into tension with one another. As a result, the audience moves from a set, taken-for-granted interpretation of the email and to a novel, surprising and (hopefully) poignantly humorous one.

As Beeman notes, bisociation or double-framing is the heart of a good deal of humour. Even more specifically, polysemy is, perhaps, the most ubiquitous form of humour. In these, instances, humourists leverage the multiple meanings of words or phrases. The result is that a single conversational routine can have two completely different meanings – a conventional, taken-for-granted one and a second, surprising one. The humourist works to move the audience from the conventional to the surprising. The glacial example represents, I claim, a particularly interesting instance of such humour because the polysemy of the glacial metaphor is not to be found in any dictionary. Rather, it is an emergent kind of polysemy brought about by climate breakdown. It is, in other words, evidence of climate breakdown in our second nature.

I saw the bisociation of the glacial metaphor as being a strong basis for an entry to this competition both because of the ways in which the polysemy inherent in the case as outlined fits the structure of humour as outline by Beeman and others and, secondly, because the competition calls for compression. The maximum video length allowable under the competition rules is two minutes. The question, then, is how to communicate climate breakdown in a way that is humorous and that can adequately be achieved in under two minutes. Leveraging bisociation and conceptual blending, as I do in this piece, helps with that work of compression. Compressed into the email that forms the basis of this piece are, essentially, two climatic realities, two worlds. As such, the single short text of the email does double duty: it captures the complacency of the Holocene: the extent to which nature is taken-for-granted so as to be rendered into clichés. At the same time, seen through an Anthropocene lens, it serves to capture the extent to which climate breakdown is destabilizing old certainties.

This video was awarded second place in the 2023 edition of the competition. This award helped confirm to me that there is real communicative potential in this essential concept of climate induced bisociation. The concept made sense to people, it resonated with an audience and succeeded in its goal of communicating the uncanny effects of climate breakdown in a compressed way. Producing this piece of practice was very helpful to me in coming to understand how an instance of bisociation like the example of the glacial metaphor might be put into communicative action. By arriving at that central insight – that the metaphor had become bisociated – I was able to build out an entire scenario and mini-world in which that central bisociation formed the communicative engine. Because the phrase is so often used as cliché in relation to processes and project management, I set the piece in an office setting. This then led me to thinking of other instances of corporate cliché that might jar in the context of climate breakdown. I arrived, through this thought process, at the idea of being 'snowed under' and at the concept of 'boiling the ocean'. Neither of these instances is a true instance of ecocultural anachronism in the way that the glacial metaphor is (or is becoming). By including the glacial example as the middle example of the three, however, I was able to use hyperbole and comedic licence to extend the same dynamic to the others.

From the process of creating this piece, I learned that the key is to identify at least one solid instance of climate induced bisociation of ecocultural anachronism to serve as the communicative heart of a piece of communication. From there, the rest is essentially a matter of finding the right packaging by which to deliver that instance.

Please view the piece using the QR code below or the following URL:
https://youtu.be/nNotiC6nq8U

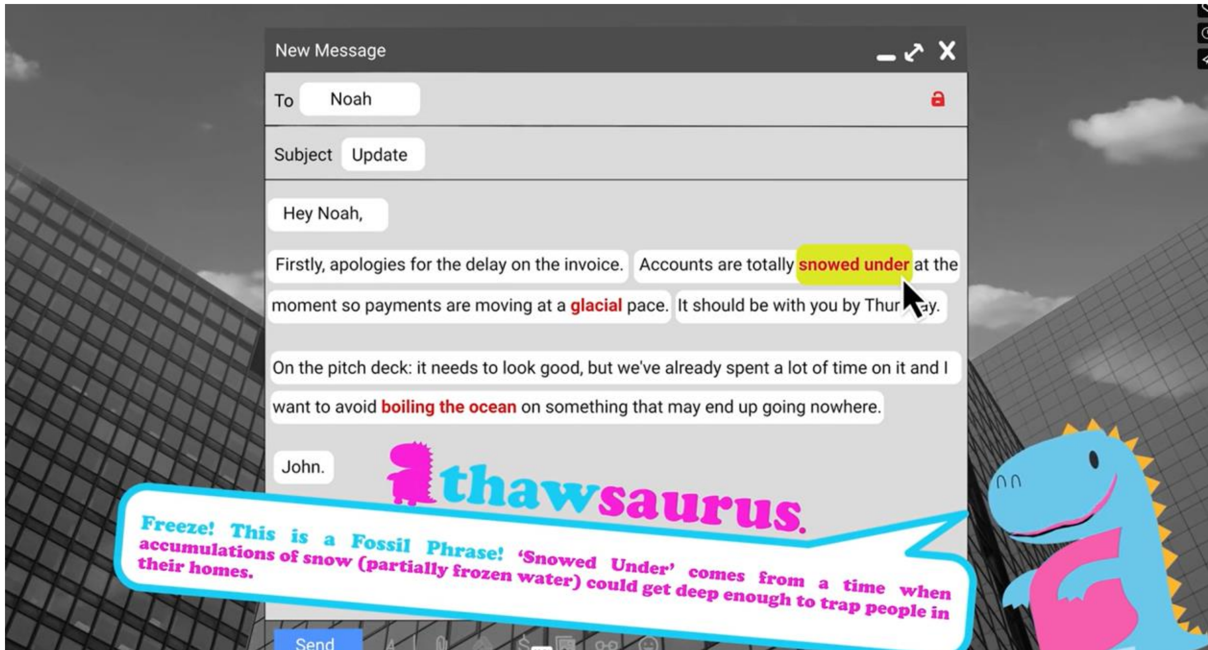


Figure 10: Screenshot from Thawsaurus video

Figure 11 QR code - please view the Thawsaurus piece here by scanning QR code

This was not the only piece of communications practice in which I explore these ideas. In 2024, I again made an entry to *Inside the Greenhouse*'s climate comedy video competition. In this video, I nod to ideas of sustainability by making a number of climate comedy cartoons via a process in which discarded tetrapak containers - juice or milk cartons - are used as intaglio plates on which to engrave etchings which can then be inked and printed onto paper.

In this video, I made one of the cartoons about the concept of camouflage mismatch. An explorer wearing a camouflage pattern for snow encounters a polar bear in a

snowless Arctic and realizes that he is in danger. That piece is viewable at the following URL [https://youtu.be/mcUejQMJGY0] or by scanning the QR code below.

Figure 12 QR code - please view the camouflage mismatch piece here by scanning QR code

This video received an honourable mention in the 2024 competition, once again signalling promise in using these kinds of mismatches to generate climate comedy.

Chapter 5: Leveraging Ecological Anachronism for Climate Communication

While in the previous chapter, I looked at the concept of ecocultural anachronism in the round, from a global perspective, In this chapter I:

- Take the basic mechanism of climate breakdown-induced bisociation discussed in the previous chapter and consider how it has been mobilised by climate communicators to communicate, in a compressed and compelling way, the reality of climate breakdown.
- I consider two different kinds of blends - ‘found’ blends and ‘manufactured’ blends. In each case, I present three examples.
- I end the chapter by discussing in detail the notion of ‘running the blend’ - the idea that seemingly nonsensical blends may, in fact, contain valuable insights about the nature of climate breakdown and the Anthropocene.

The central focus of this project is on using Holocene-Anthropocene blends to communicate climate breakdown and our loss of companion world. In the following sections, I consider examples of three categories of such Holocene-Anthropocene blends. In this section, I consider the first of these three categories: I refer to these as found blends. These are Holocene-Anthropocene blends that are not deliberately made or manufactured but, instead, are found fully formed and simply require highlighting or framing in order for them to become powerful and uncanny representations of the Anthropocene and of climate breakdown.

5.1 MacFarlane’s Ice Alarm

I have briefly discussed MacFarlane’s example of the ice alarm in previous chapters. It is worth, however, considering it in more detail here as an instance of climate communication. Macfarlane recalls having read “how small craft hugging the Greenland coastline will sometimes find their GPS navigation devices screaming alarm, warning of collision” (2019, Ch.10). The issue, MacFarlane continues, is that

“The coordinates of the former extent of glaciers have been inputted into the mapping, but the retreat rate has been so fast that they are sailing into and through the digital phantom left behind by the ice” (Ibid). This anecdote, with its spectral note, follows a similar structure to the pronghorn blend already mentioned. It suggests a (mapped) Holocene input space in which there are glaciers and an (unmapped) Anthropocene one in which they are (at least partially) gone. The blended space consists of the Holocene map and the Anthropocene territory. This, of course, produces a mismatch. The blend can be diagrammed like this:

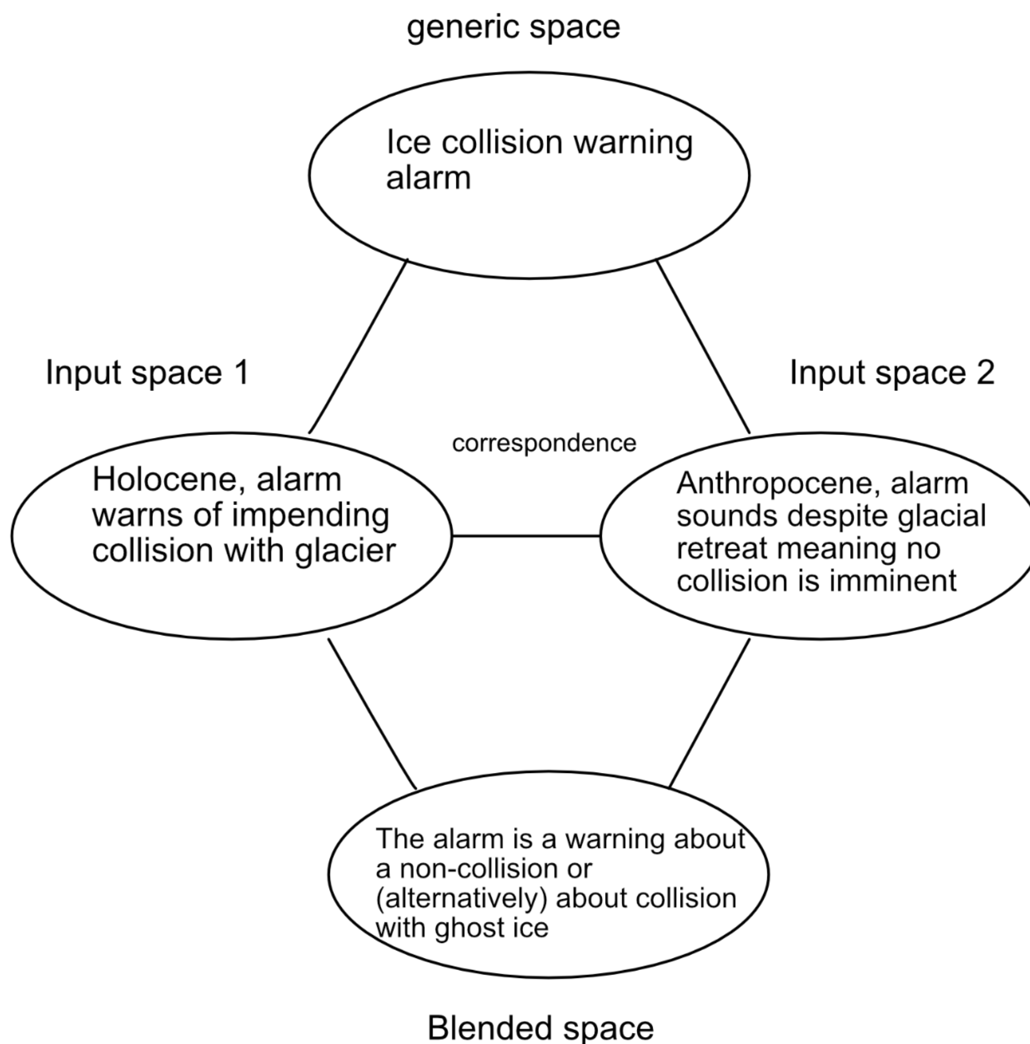


Figure 13: MacFarlane alarm as blend

This example demonstrates well two of the primary reasons I suggest Holocene - Anthropocene blends as powerful means of communicating climate breakdown. The first has to do with elaboration or with the kind of “running the blend” encountered earlier. This, again, is the notion that a blend can sometimes function as a sort of simulation that produces insights about the subject at hand when ‘run’ or elaborated through imagination. Recall that one of the most fascinating aspects of conceptual blending theory is that this property pertains even (or perhaps especially) to those blends that are on the literal, surface level absurd. Think again of the pronghorn blend: of course the pronghorn is not being chased by ghosts but thinking of the situation in that way delivers real insight into why the pronghorn is as fast as it is. Running MacFarlane’s blend produces insight too. MacFarlane’s alarm suggests the semi-paradoxical notion of an alarm warning of a collision with no ice. In some sense, of course, this is precisely what we ought to be alarmed at when reading MacFarlane’s story. In its Holocene companion world, the alarm warned of collision with ice. Such a collision would, of course, have constituted a local disaster for the vessel and its crew. In the Anthropocene, however, the alarm warns of a collision with the absence of ice. And, because of climate breakdown, that is precisely the collision-course we might worry about being on at a civilizational level. In the context of climate breakdown, the idea of an alarm urging us to watch out for vanishing sea ice is, in fact, not paradoxical but instead makes perfect sense. Collision with ice would have constituted a local disaster, collision with no ice represents a global one.

The other reason that I see blends like this one as representing powerful means of seeing and communicating climate breakdown is, again, compression. In MacFarlane’s anecdote the map and its alarm have come unmoored from their companion world. The false alarm is the manifestation of this unmooring. The alarm, as such, becomes a sort of password in Rush’s sense. It is a knot tying together two environmental contexts, two worlds. Into this false alarm is compressed the fate of humanity writ large. We are, on a grand scale, coming unmoored from our companion world and moving into (to use an appropriate metaphor) uncharted waters. The ship and its alarm represent our collective fate in the face of climate breakdown, but in neatly compressed microcosm.

5.2 Northwest Passage Cruises

Jenny Kerber presents another example pertaining to ships and sea ice in her analysis of representations of the Northwest Passage in promotional and marketing literature for polar cruise tourism (Kerber, 2022). In recent years, retreating Arctic sea ice has meant it has been possible for cruise lines to run cruises through the Northwest Passage. Kerber points out that the promotional materials surrounding these cruises have to strike a delicate balance. This stems from the fact that, as an abstract unit of culture, as a cultural model, the Northwest passage has a particular meaning in the West. In *Voyages of Delusion*, Glyn Williams captures something of this cultural meaning when he says that the Northwest Passage was “a name that in time would carry emotive implications, of men and ships battling against hopeless odds in a frozen wilderness” (Williams, 2002, p.xvi). It was a place where “Mountainous icebergs towered over tiny vessels” (Ibid). The passage is a ‘fabled’, ‘mythic’ route whose storied past is pockmarked by shipwreck and disaster. As Kerber says, it is a place that has “historically been figured as impenetrable, foreboding and wild” (2022, p.276). The cultural model of the impenetrable Northwest Passage, then, clashes with the contemporary Anthropocene reality in which it is passable for much of the year by cruise liners. Kerber refers to the “narrative challenges involved in offering guests an enticing story buoyed by the romance of the past while also navigating a climate-altered present and future” (Ibid). She critically reads the ship and its passages as “sites of cultural and textual paradox, considering recurrent tropes used in their promotion” (Ibid). A paradox, of course, is a blend of two seemingly contradictory entities or phenomena.

The figure of the Northwest Passage cruise, and the marketing materials that surround these cruises, represent, I argue, a Holocene-Anthropocene blend. Once again, there are two input spaces, a Holocene one and an Anthropocene one. In each input space, is a voyage through the Northwest Passage. In the Holocene space, the ship is an icebreaker and the journey is one bespoken by ideas of ordeal and survival. In the Anthropocene space, on the other hand, the ship is a cruise liner and the journey is defined by its comfort and accessibility. In the blend, the paradoxical figure of a luxury cruise going on a risky journey of discovery emerges. Again, as in the case of MacFarlane’s ice alarm, we can ‘run’ this apparently

paradoxical blend and produce real insight. The paradoxical figure of the Northwest Passage cruise synthesizes into the idea of a journey into uncharted waters. The original Western (Holocene) journeys into the Northwest passage were literal journeys into uncharted waters (uncharted, at least, from the perspective of those Westerners on the ships). The cruise represents another kind of journey into uncharted waters. In the case of the cruise, however, the scale is planetary and civilizational. The local journey - through the passage - has been tamed and opened up; but on a planetary level, we are firmly in a place of risk and terrifying discovery.

5.3 Pumpkin Spice on Ice

Moving away from the cryosphere but staying with the theme of ice, the Pumpkin Spice Latté (PSL), a cult menu item from coffee multinational Starbucks, presents another example. The PSL is a seasonal drink that first appeared on global coffee chain Starbucks' autumn menu roughly twenty years ago. It has since developed a cult-like following and its annual return to stores garners media attention every year. Writing for *Atlantic*, Ian Bogost says "I drink the Pumpkin Spice Latte to commune with autumn" (Bogost, 2023). He describes the drink as a sort of "Seasonal essence" infused with "the fundaments of fall itself" (Ibid). Considering what might account for the drink's enormous popularity, he asks "What does it mean that the ritual of pumpkin spice is so new, yet seems so venerable?" (Ibid). By way of answer to his own question, he writes, "pumpkin spice was not merely successful, but also correct. Cinnamon, nutmeg, clove, and ginger, tinged orange and suspended in a medium for their delivery: This is autumn" (Ibid). The sensibility, affect and aesthetic that surround the drink and its marketing tap into a literary trope of Western autumn with a direct chain of transmission back, through Keats' ode "To Autumn" and to the classics. The PSL, from the aesthetic of its marketing to its ingredients, taps into a timeless trope of literary Autumn that Keats would surely have recognized.

Climate breakdown, however, presents a problem. Autumn where the PSL is most popular is changing. As Liza Featherstone writes, "Alas for these previously timeless pleasures, in places most indelibly associated with storybook fall, a distressing balminess prevails" (Featherstone, 2021). A mini literature has emerged in recent years in which (North American) writers share their uncanny and jarring experiences

of encountering the PSL while the weather is still summer-like. Sarah Jane Attardo, for example, recalls realising that “The fact that I was waiting for a warm pumpkin-flavoured coffee while it was still hot enough to wear shorts and a t-shirt is an image I struggle to comprehend” (Attardo, 2017). Jaya Saxena, meanwhile, invokes the uncanny when she writes that “Climate change makes for an uncanny pumpkin spice season” (Saxena, 2023). Making the same point from another direction, Emily Contois proposes that the flavour’s enormous popularity may stem, in part, from the fact that, as the onset of autumnal weather and nature is delayed due to climate breakdown, cultural markers of the seasonal transition become more important. She says, “As climate change results in summers of record heat and violent storms … the idea of autumn that pumpkin spice’s flavours conjure is ever more reassuring” (Contois in Heil, 2022). In any case, what emerges from this mini literature is the idea that what might be termed literary autumn - autumn as trope - is coming unmoored from literal autumn. Food writer Diana Kelter provides a neat illustration of this dynamic. She notes, in relation to the PSL, how consumers are growing “accustomed to living in two realities” (Kelter, 2024). She goes on, “While for many individuals their outside reality still feels like a hot summer day, their social feeds have already switched into a fall mode” (Ibid). In other words, in the cultural, discursive space of social media, the old traditional Holocene patterns persist whereas in the grounded reality of the Anthropocene outdoors, those patterns are being scrambled.

Starbucks has responded to the changes already underway and pre-empted the changes certain to continue by adding cold versions of the drink to their menus. A 2019 piece in *Business Insider* is headlined “Starbucks is rolling out Pumpkin Cream Cold Brew, and it reveals how climate change and a fundamental shift in the chain's strategy are transforming the menu” (Taylor, 2019). The article points out that 18 of the 19 warmest years in recorded history had occurred between 2001 and 2019 (Ibid). In those circumstances, the article continues, “A hotter end of summer and early fall makes a chilled version of the PSL even more compelling. So, the arrival of the Pumpkin Cream Cold Brew makes complete sense” (Ibid). In a blog post meanwhile, Kathryn Wilson refers to the iced PSL as “the perfect cursed symbol of our current predicament” (Wilson, 2020). Wilson, in other words, views the PSL as a kind of password - as a perfect compression of our current predicament.

The figure of the iced PSL is, I argue, another powerful symbol of the Anthropocene and, once again, it constitutes a Holocene-Anthropocene blend. In this case, the blend is quite literal. Holocene Autumn is represented by the warm flavours evocative of harvest. Anthropocene Autumn, on the other hand, which is effectively a continuation of summer, is represented by the ice. The drink, then, is a sort of paradox: a cold warming drink. Again, though, despite the paradox, it captures the uncanny seasonal disruption brought about by climate breakdown. We can, again, ‘run’ the blend and understand Anthropocene Autumn as a warm, cool season.

5.4 Passwords

I have already discussed Elizabeth Rush’s notion of Tupelo as password. I reintroduce it briefly here to demonstrate how it has been put to use by climate communicators. In the opening chapter of her book on rising sea levels, Rush reflects on the word ‘Tupelo’, the name of a tree species that grows in the marshlands of Rhode Island where Rush is making her study (Rush, 2018, p.2). She explains that it “is Native American in origin, and comes from the Creek ito and opilwa, which, when smashed together, mean ‘swamp tree’” (Ibid). As such, she continues, “Built into the very name of this plant is a love of periodically soaking in water” (Ibid). The tree’s name is an example of language that, Rush writes, has always “tangibly connected the physical world and the world on the page and in our conversations” (Ibid). By way of example, Rush writes that “word of tupelos once told marsh waders what kind of topography to expect and also where to find relatively high ground” (Ibid). There is a particular ecology modelled in the very name of the tree. When, however, Rush encounters Tupelos in the tidal marshland of Rhode Island, they are dead, their “ghostly silhouettes” leafless and stark against the horizon (Ibid, p.3). They have perished because their roots have been inundated with saltwater: a product of climate change induced sea level rise. Rush writes that she found herself “reading an unfathomably large planetary phenomenon … Inscribed into the skeletal tupelos” (Ibid, p.5). The ecology Rush reads as ‘built into’ the word tupelo is disappearing. The ‘tangible connection’ Rush describes between the word tupelo and the physical world is being stretched to severing point. The word is becoming unmoored from its companion world. In turn, the word tupelo becomes, for Rush, what she terms a “password”. The word is, she writes “the stone I pick up and

drop in my pocket to remember" (Ibid, p.14). Passwords, like tupelo, Rush suggests, "might grant us entry into a previously unimaginable awareness" (Ibid, p.8).

Rush's password is another example of a Holocene-Anthropocene blend. Passwords - in the conventional sense - are always blends. They are, at one and the same time, regular words and codewords that carry a second compressed meaning for those in the know. In Rush's case, her Tupelo example has a Holocene input space and an Anthropocene one. In the Holocene space are regular Holocene Tupelos, their etymology matching their appearance. In the Anthropocene space are the skeletal, dead Tupelos. Rush combines the Holocene etymology with the Anthropocene reality in order to produce a paradoxical blend. The result is the notion of a water-loving tree that has been killed by over-exposure to water.

Rush clearly conceives of her password, her blend as compressing to human scale the massive-scale phenomena of climate breakdown. She describes "reading an unfathomably large planetary phenomenon … Inscribed into the skeletal tupelos" (Ibid). Moreover, she thinks of the password as a sort of portable, compressed reminder of the changes underway. The word is, she says, the stone she picks up and carries in her pocket to remember.

Others have used this same 'password' dynamic to communicate climate breakdown, albeit without naming it as such. The Yupik term "tagneghneq" provides a clear example. In the 2016 Arctic Report Card, Executive Director of the Study of Environmental Arctic Change, Brendan Kelly, includes an anecdote about learning Yupik words for sea ice from Yupik scholar Conrad Oozeva in 1979. He writes that "Some of those terms refer to types of sea ice that are rare or non-existent in 2016" (Kelly, 2016, p.100). He gives 'tagneghneq', referring to thick, dark, weathered ice, as an example. In Kelly's view, the word is on the brink of obsolescence. Tagneghneq, then, is becoming unmoored from its real-world referent. Instead of dying out, however, it has an afterlife as a 'password' for climate change communicators. As such, in an article on climate communications entitled "How can we Help put a Human Face on Climate Change?", Astrid Caldas, senior climate scientist at the Union of Concerned Scientists writes:

> "Perhaps one of the most poignant examples of a human face of climate change that has stayed with me is that of the Yupik people in Alaska. They have various words for sea ice, like the one for thick, dark, weathered ice, which has become very rare: tagneghneq. That is hard to explain to the next generation — one cannot know what something is if one cannot see it" (Caldas in Platt, 2018).

The term 'tagneghneq' then appears time and again in writing about the climate. Oliver Milman refers to it in *The Guardian,* in an article which he opens with the line, "The extreme warmth of 2016 has changed so much for the people of the Arctic that even their language is becoming unmoored from the conditions in which they now live" (Milman, 2016). Perhaps the word's most notable outing, however, is in a book written by Mary Robinson, former United Nations High Commissioner for Human Rights and President of Ireland, who writes that "with the advance of climate change, common Yupik words such as *tagneghneq*—used to describe dark, dense ice—are becoming obsolete" (Robinson in Fine, Love-Nichols and Perley, 2023).

Tagneghneq functions in these texts as password, as Holocene-Anthropocene blend. In its Holocene input space, it has its conventional meaning: thick, hardy, multi-year ice. The key point, though, is that in the Anthropocene space it has another emergent, almost ad-hoc meaning: a kind of ice that is disappearing because of global warming. In the blend, its conventional meaning - hardy ice - collides with its emergent meaning - vanishing ice - to produce another paradox. 'Tagneghneq', in the blend, refers to quickly vanishing, long lasting ice or 'threatened resilient' ice. This word then recurs in climate communication because it so neatly compresses the notion that we are quickly losing our Holocene companion world.

All of these preceding cases revolve around the same central themes. They are all examples of units of culture coming unmoored from their Holocene reference points. As such, these units of culture become sort of lagging features of an earlier climatic reality. In some instances, the reference point in question is nature itself. This is the case, for example, with MacFarlane's map. The map has come unmoored from the reality of the world. In other cases, the reference point is a cultural model. This is the case with the Northwest Passage cruises, whose marketing materials invoke a cultural model of the Northwest Passage that belongs to a cooler world. In all cases,

though, the fundamental mechanism is a loss of companion world. Each of these units of culture takes on a ghostly character as the afterimage of a vanishing world. Each is an example of climate breakdown manifest in second nature.

5.5 Manufactured Blends

The preceding examples are instances of what I have termed ‘found’ Holocene-Anthropocene blends. In other words, the unmoorings and decouplings that animate them were not manufactured for the purposes of communication of climate breakdown. Instead, they were discovered by someone who then, by recounting their details and carefully framing them, activated them as compressions of climate breakdown. In the following sections, I turn to considering examples that have been manufactured for the specific purposes of communicating climate breakdown.

The distinction between the examples I present in each of these categories has to do with background knowledge. The notion of ‘completion’ in conceptual blending theory suggests that we interpret blends by using our background knowledge. So, for instance, in the ‘glacial’ blends discussed earlier, the writers in those instances relied on us being able to recruit background knowledge about the conventional meaning of ‘glacial’ but also about changing glacial dynamics in the context of climate breakdown. In the first category of manufactured blends I present here, climate communicators cleverly exploit their audiences’ unconscious background knowledge of the Anthropocene in order to produce blends.

The three examples in this section follow the same basic dynamic. They each rely on an emergent piece of Anthropocene background knowledge to defamiliarize a hyper-conventionalised Holocene cultural model. Once again, this will be made clearer by example:

5.6 The Anthropocene *Titanic*

This example relates to the sinking of the *Titanic.* The sinking of the *Titanic* has become a highly conventionalised metaphor in Western culture. In 1999, satirical newspaper *The Onion* released a book, *Our Dumb Century*, which is a compendium of satirical mock news stories about the defining moments of the twentieth century. The faux-headline for April 16th, 1912 reads “World’s Largest Metaphor Hits Ice-

Berg" (Dikkers, 1999, p.13). In its 'coverage' of the Titanic disaster, *The Onion* points to the degree to which that fateful event has been co-opted as metaphor time and again since. The copy goes on: "'*Titanic*, Representation of Man's Hubris, Sinks in North Atlantic … *Titanic* struck by icy representation of nature's supremacy" (Ibid). Denis Jamet and Caroline Crépin demonstrate how the disaster is consistently used in media as metaphor for communicating what they term "modern shipwreck", by which they mean public stories of "significant crises" (2024, p.9). They demonstrate how it has been used as metaphor for negatively perceived domains from the Covid19 pandemic to Brexit and from the inflation in the global economy to climate change (Ibid). The metaphor is made up of a number of stock parts. Jamet and Crépin parse these out: they list the iceberg, the insufficient lifeboats, the various classes of passenger, the band that keeps on playing, the captain, the unsinkable ship and the cold sea (Ibid, p.32). There is, in other words, a relatively fixed cultural model of the *Titanic* story and its component parts that communicators of various kinds can invoke for various purposes.

In fact, the metaphorical *Titanic* makes an appearance in Fauconnier and Turner's *The Way We Think.* In that book, the authors refer to an example wherein a political commentator said of then president Bill Clinton in 1998, "If Clinton were the *Titanic*, the iceberg would sink" (2002, p.221). The commentator was remarking on Clinton's striking ability to survive political scandal. This counterfactual, they point out, takes input from a *Titanic* space and a political Clinton space. These are blended to produce a novel construction. Clinton becomes the *Titanic* and, in the blend, he becomes "even more unsinkable" than the real ship (Ibid). At the same time, the scandal is constructed as the iceberg which, Fauconnier and Turner say is cultural code for "the supreme obstacle on a scale of immovability" (Ibid). It is with this iceberg, as described by Fauconnier and Turner, that I will be chiefly concerned in this climate breakdown related example.

Beginning around the time of the one-hundredth anniversary of the *Titanic*'s sinking, in 2012, a small new body of texts emerged in various media that imagined a re-run of the *Titanic* sailing in the modern day. Often, this was framed or depicted as a *Titanic* 'tribute' or 'memorial' sailing. What is notable about these texts is that in the rerun, everything is imagined as a replica of the original except for the iceberg.

Several cartoons depict this scenario. I include three examples available from *Cartoon Stock* here for illustration but there are several more besides these.

[105]

Figure 14: Titanic cartoon (polar bear)

[105] Deligne, F. (2006) Titanic II: The Revenge [cartoon] 14 May. Available at: https://www.cartoonstock.com/cartoon?searchID=EC263049

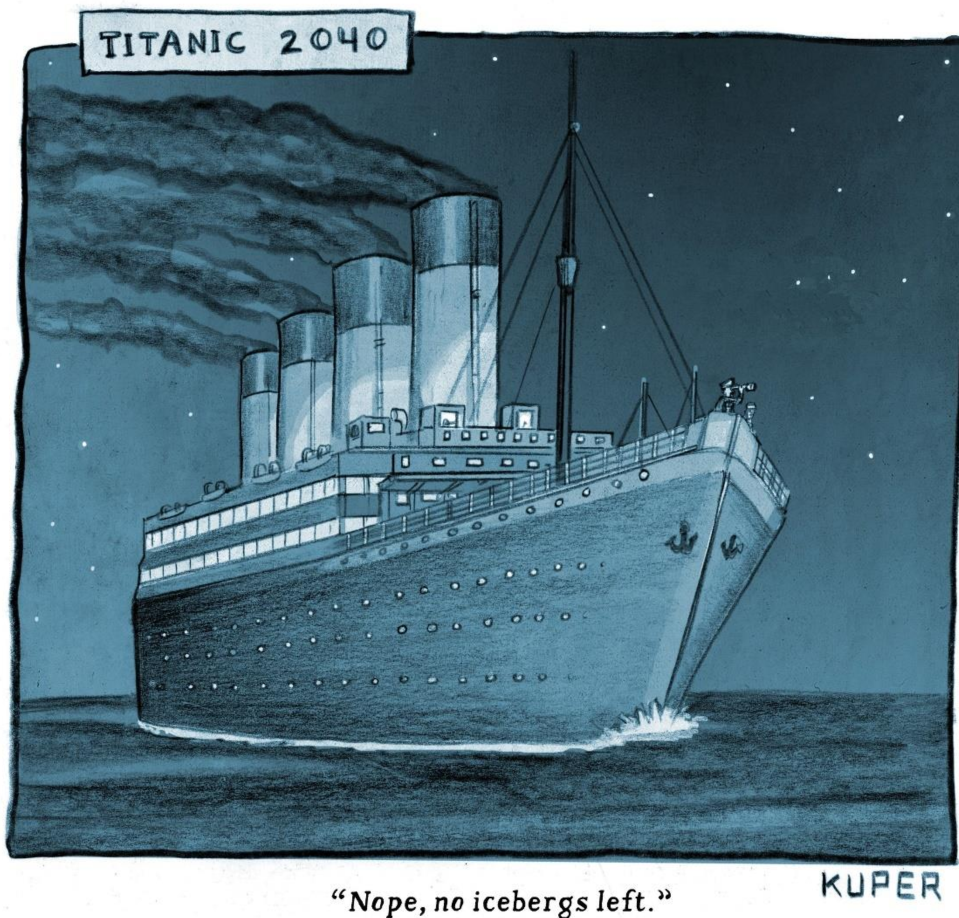
TITANIC 2030: THE REMATCH

CartoonStock.com

Figure 15 Zellman, 2020 Titanic cartoon

[106]

[106] Zellman, J. (2020) *Titanic 2030: The Rematch* [cartoon]. 23 May. Available at: https://www.cartoonstock.com/cartoon?searchID=WC900229



[107][108]

Figure 16: Kuper, 2021 Titanic cartoon

These examples, and there are several more, can be interpreted through conceptual blending theory. In them, there are two input spaces, a 1912 space and a contemporary (or near future) space. Each of these input spaces contains corresponding elements: a ship, an iceberg (or at least the mention of the absence of one), a voyage, a collision course etc. In essence, the elements in each of these input spaces are the same except for the icebergs. The 1912 space contains what might be termed a Holocene iceberg. The contemporary space contains what might be termed an Anthropocene iceberg (or no iceberg at all which is, in a sense,

[107] Kuper, P. (2021) *Titanic 2024: "Nope, no icebergs left."* [cartoon] 25 August. Available at: https://www.cartoonstock.com/cartoon?searchID=WH900421

another version of the same idea). In other words, each input space contains a different cultural model of iceberg. It is only this latter Anthropocene cultural model of iceberg that is projected onto the blend.

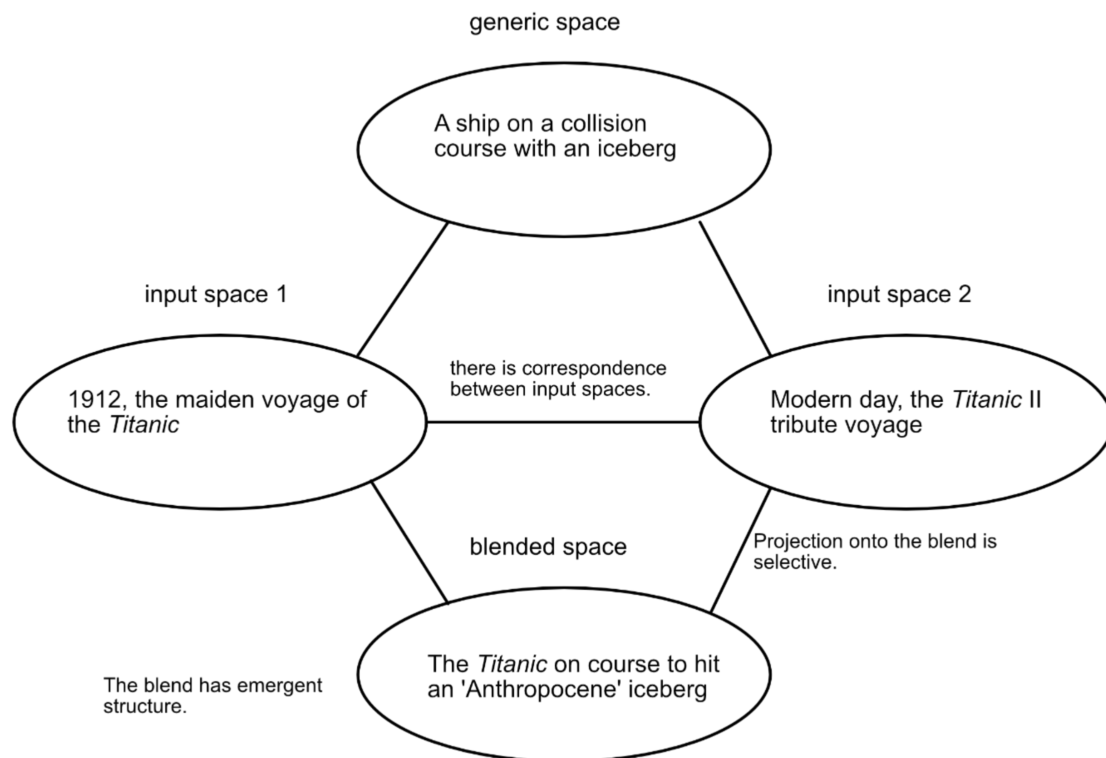


Figure 17: Anthropocene Titanic blend

In this case, the basic framework of the blend derives from the 1912 input. The 1912 input and the common background knowledge that surrounds it provides the blend with the basic notion of 'collision course' and 'impending disaster'. The modern day input is present in two ways. The first differs depending on the cartoon but includes ideas such as the voyage being a tribute voyage or a rematch: this immediately suggests a temporal shift. Secondly, and most importantly, the modern day input space contributes the iceberg (or its absence) to the blend.

It is important, at this point, to determine the nature of the 'Holocene' iceberg and the 'Anthropocene' iceberg. The 'Holocene', or 1912, iceberg is a key character in the conventional *Titanic* cultural model and has, in its own right, become something of a conventionalised metaphor. The iceberg is constructed as an antagonist to the

protagonist *Titanic.* This core symmetry in the story is evidenced, for instance, by the emergence of a number of texts that recount the famous timeline of events from the perspective of the iceberg. Richard Brown, for example in his *Voyage of the Iceberg* traces the berg from its calving in Greenland to its fateful intersection with the *Titanic* and beyond. Charles Roberts, similarly, provides a biography of the famous iceberg in his poem "The Iceberg". These texts demonstrate the extent to which it is possible to think of the *Titanic* story as one featuring two central characters.

In order to determine the nature of this particular iceberg, I turned, again, to critical discourse analysis (and critical metaphor analysis in particular). I performed a LexisNexis news search for the term "proverbial iceberg". I then excluded all results that included the term "tip" in order to filter out most of those articles that referred to the 'tip of the proverbial iceberg' metaphor. Of the 185 instances that this produced, about half (89) of them refer to the *Titanic* iceberg; most of the other half (96) are versions of the 'tip of the iceberg' metaphor that don't use the precise term 'tip'. In most of the *Titanic* instances the "proverbial iceberg" is simply a synonym for an almost insurmountable obstacle or fatal challenge looming in the future. So, for example, The *Edge* Singapore writes of shipping company Neptune Orient Lines that "With a debt mountain of US$2.6 billion and a debt-to-equity ratio of more than four, it needs to do something, anything, to prove to the market that it's not going to hit the proverbial iceberg.[109]" Clearly, the iceberg here is a fatal financial situation but the details are not painted in. I am more interested in those examples where the 'iceberg' element of the metaphor is used to refer to something specific. By observing what kinds of things the iceberg is used as stand-in for, we can see the true cultural meaning and valence of the iceberg. An analysis of the instances yields a number of categories:

(i) The iceberg is constructed as a humbling reality check:

A piece on India's Adani Group in *Business Today* exemplifies this construction. The piece begins by detailing how, for a period, the business seemed - to use a *Titanic*-

[109] The Edge Singapore (2003) 'Corporate', The Edge Singapore, 27 January. Available at: https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:487N-2840-01KV-10G3-00000-00&context=1519360 (Accessed: 16 March 2025).

appropriate term - ‘unsinkable’. The piece begins by saying that “For the better part of 2022, it was all about the Adani Group stocks in the markets”. The article continues: “It was as if the Adani Group could do no wrong.[110]” Then, however, Hindenberg, an investment research firm, released a report on the company. The report alleged various forms of malpractice on Adani’s part, up to and including fraud. The piece in *Business Today* puts it like this, “the Hindenburg report has hit Adani like the proverbial iceberg it never saw coming”[111]. All of a sudden, Adani’s dominance is shattered: “over $100 billion of the group's market capitalisation was wiped off in just a few days”[112]. In this piece, the iceberg is constructed as a sort of humbler of giants, in the form of the Hindenberg report, it brings Adani crashing back down to Earth.

(ii) The iceberg is constructed as a fated inevitability:

Collision with the iceberg is constructed as a fated disaster written in the stars. The business commentator Ivan Osorio provides a good example of this. When president of the American Services Employees International Union, Andy Stern, abruptly stepped down from his post in 2010, Osorio wrote an article in which he speculated on Stern’s possible rationale. In that article, Osorio proposes that Stern "may be getting off the Titanic that is SEIU before it runs headlong into the proverbial iceberg in the form of severely underfunded pensions.[113]" In other words, Osorio is proposing that Stern realized his union was on a collision course with an immovable inevitable and possibly existential crisis and, so, decided to step aside. In this construction, the iceberg is an inevitability in one’s path.

(iii) The iceberg is constructed as a worthy adversary:

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[110] Majumdar, S. (2023) ‘Gautam Adani faces his biggest challenge yet. Can he survive?’, Business Today, 5 March. Available at: https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:67NT-2T31-JCF1-F184-00000-00&context=1519360 (Accessed: 16 March 2025).
[111] Ibid
[112] Ibid
[113] Targeted News Service (2010) ‘Labor Notes: May 2010’, Targeted News Service, 1 May. Available at: https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:7YHV-FK10-Y9B9-K54D-00000-00&context=1519360 (Accessed: 16 March 2025).

Finally, the iceberg is sometimes used to stand in for a named adversary or opponent. Robert Libman, writing in the *Montreal Gazette* in summer 2023, provides an example of this. Commenting on Canadian politics, he characterises a cabinet reshuffle in then prime minister Justin Trudeau's cabinet as akin to 'rearranging the deck chairs on the *Titanic'*. The reshuffle may come to be seen, he thinks, as "a futile action in the face of impending catastrophe"[114]. That catastrophe was set, from Trudeau's perspective, to come about at the next election when Trudeau and his government run into what Libman terms "the proverbial iceberg in this case[115]" who is "Pierre Poilievre, leader of the conservative party"[116]. In this instance, then, the iceberg is a named adversary.

Taken together, a multifaceted picture of the iceberg emerges: it is an adversary, the *Titanic* is fated to encounter and collide with it, and it serves to rebut the human hubris embodied in the ship. This construction of the iceberg is the one that emerged almost as soon as the tragedy occurred. All these elements are seminally recorded, in fact, in Thomas Hardy's occasional poem "The Convergence of the Twain". Hardy constructs the iceberg as opponent to the ship. It is, he writes, the ship's "sinister mate", its dark twin (Hardy, 1912). Moreover, Hardy sees the crash as fated, as predestined. He imagines that the ship and iceberg "were bent / By paths coincident / On being anon twin halves of one august event" (Ibid). Finally, Hardy constructs the iceberg as puncturing humanity's hubris. After the collision, Hardy imagines the opulent luxury of the Titanic's interiors rotting on the sea floor. "Dim moon-eyed fishes near / Gaze at the gilded gear / And query: "What does this vaingloriousness down here (Ibid)"? Different authors place different levels of emphasis on these elements of the iceberg. Roberts, for instance, in his biography of the berg depicts the *Titanic* crash as consisting of a fleeting – if important – moment in the iceberg's enormous lifespan. Nonetheless the same basic features remain. Roberts' iceberg serves as an imminent rebuttal of human hubris insofar as its scale and lifespan are described in such a way as to make the scale and span of the ship seem

[114] Libman, R. (2023) 'Trudeau rearranges the Titanic's deck chairs', The Gazette (Montreal), 29 July. Available at: https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:68TH-V141-JBKR-N2MG-00000-00&context=1519360 (Accessed: 16 March 2025).

[116] Ibid

insignificant. Roberts also hints at the idea of fate in his telling. The iceberg is said to hear small waves lapping at its base. They are “Lipping and whispering, lisping with bated breath / A casual expectancy of death” (Roberts n.d.). Once again, there is a sense in which the moment of impact is being foreshadowed.

This construction of the iceberg accords with a broader Western cultural construction of ice that traces its history back to eighteenth and nineteenth century Romanticism. These are the same – or similar – ideas encountered in the previous chapter in relation to glaciers. At the time of the *Titanic* disaster, in 1912, this view of ice would still have dominated in Euro-American cultural contexts. It is, in fact, a cultural paradigm that continues to hold some sway today. The Romantic view of ice is dominated by the notion of the Sublime. The Sublime, again, refers to all that in nature sparks a feeling of frightened awe. The feeling triggered by the sublime is ideally conceived of as dialectical: on the one hand it is a feeling of immense overwhelm and terror but at the same time it is a feeling of being awe-struck and inspired.

The *Titanic* iceberg as constructed by the *Titanic* metaphor or by classic accounts such as Hardy’s is painted in terms of the Sublime. More recently, however, as discussed in relation to glaciers, anthropogenic climate breakdown is introducing new conflicting meanings for ice. Global warming means that Earth’s cryosphere is melting at an unprecedented rate. The picture in the Arctic region is even more extreme as the phenomenon of “Arctic Amplification” (Adler et al., 2022) means that that region is warming at almost four times the rate of the global average. This rapid warming and the rapid melting of ice attendant on it produce new (Western) cultural understandings of ice. As Elizabeth Leane and Ben Maddison say, “Icebergs have taken on dramatic new meanings in the Anthropocene” (Leane and Maddison, 2018, p.99) . Or, as Dodds puts it, “The monstrous icebergs that confronted the Titanic in the North Atlantic seem far removed from more contemporary accounts of thinning and retreat of sea ice” (2028, ch.3). Dodds writes that in place of old models premised on the Sublime, “In the twenty-first century, we are more likely to think of cold places as indicative of rapid global climate change and planetary vulnerability” (Ibid). Nature’s vulnerability is, in a sense, the very opposite of the feelings contained in the Sublime. Ice today, Dodds writes, is characterised as “Provisional and

vulnerable” (ibid). Dodds wonders whether traces of these shifting meanings are in evidence in Western culture. He writes, “We may still be ‘moved’ by ice but have our cultural and imaginative registers shifted?” (ibid). It is this cultural model of ice - as vulnerable and provisional - that is in evidence in the cartoons above. In the first, a lone, pathetic-seeming polar bear clings onto the remnants of an iceberg, helpless in the face of the massive ship. In the second, the once great iceberg has been reduced to a pitiful ice cube; in the third, the iceberg is present only as a noted absence. These cartoons, then, leverage their audience’s background knowledge of this emergent Anthropocene cultural model of ice to communicate the jarring reality of climate breakdown.

5.7 Anthropocene Desert Islands: from Isolation to Inundation

The second example I present relates not directly to the cryosphere but to the related issue of rising sea levels. Writing in the *New Yorker,* Hendrik Hertzberg says that “perhaps the most fecund of cartoon genres is the desert island” (Hertzberg, 1997, p.130). *Vanity Fair* magazine, meanwhile, calls it “the cartoon genre that just won’t die” (Handy, 2012). Barney Samson states that “there was already a recognisable desert island cartoon trope in *The New Yorker,* only six years after the first example appeared in 1931” (Samson, 2020, ch.3). While this cartoon trope is often associated with the single-panel gag cartoon style of the *New Yorker,* it is often also associated with Gary Larson’s *Far Side*. In fact, the website TVTropes.org refers to the trope as the “‘Far Side’ Island”[117]. The features of the trope, as in the case of the *Titanic*, are relatively stable and standard. A small sandy island no more than a few metres wide hosts a lone palm tree and a castaway or two. The island is surrounded by an expansive, flat sea. It is difficult to overstate the extent to which this format represents a convention in cartooning. Bob Mankoff, in an interview with Bruce Handy recalls how “at one point everyone banned them” from the magazine because the trope was so overrepresented in submissions (in Handy, 2012). Nonetheless, representative of the cartoon’s ubiquity, Cartoon Collections, the cartoon stock and licencing service set up by Mankoff after leaving the *New Yorker,* incorporates the trope into its very logo (the ‘t’ in ‘cartoon’ is represented using a palm tree that sits on the iconic circular island).

Mankoff argues that the format emerges from a longstanding Western intellectual and literary tradition of desert islands. He says, “The desert-island cartoon originally comes out of desert-island literature—Robinson Crusoe” (Ibid). John Gillis writes that “Desert islands have loomed large in Western mythical geography” (2004, p.24). They have been used, he argues, as spaces to “narrate modern individualism” (Ibid). Gillis points out that “A desert island was the setting for the archetype of the self-made man, Robinson Crusoe” (Ibid). He sees this same basic dynamic as existing into the modern day: “films like *The Castaway* still depend on desolation to narrate

[117] TV Tropes (no date) ‘Far Side Island’, *TV Tropes*. Available at: https://tvtropes.org/pmwiki/pmwiki.php/Main/FarSideIsland (Accessed: 16 March 2025).

modern individualism" (Ibid). They function by stripping everything "to the bare essentials, removing the confusing clutter of history and geography, allowing us to see with excruciating clarity the human condition" (Ibid,p.25). The desert island, then, from its Romantic period literary beginnings to its current *New Yorker* iterations provides a blank, bounded and isolated space which serves as something like a laboratory in which to examine modern selfhood. This is the Holocene Western cultural model of the desert island. Samson reads the cartoon trope as operating in this way. He notes that, like Robinson Crusoe, many characters in these cartoons are depicted as "bringing their home with them onto the island" (2020, ch.3). In other words, they seek to reestablish (at least in the *New Yorker's* case) metropolitan, elite society on the island. The result is that, in seeing some aspect of their contemporary society relocated to a blank and bounded space, the elite metropolitan readership of the magazine is forced "to examine their own behaviour from a new perspective" (Ibid). The foibles and irrationalities of modern urban life are mercilessly shown up when they are placed on the desert island. Gillis writes, "the desert island cartoon has become a favourite medium for poking fun at absurdities of modern life …contemporary foibles are hilariously magnified" (2004, p.25).

This Western tradition of 'thinking with' islands relies on a certain cultural imaginary or model of desert islands themselves. They are constructed in this imaginary as "A place separated from normal time and space" (Ibid, p.26). They are, moreover, bespoken by ideas of "Boundedness and isolation" (ibid). They take on the twin meanings of isolation and freedom from society's strictures. On the one hand, "Islands are where we quarantine the pestilential and exile the subversive" (ibid, p.3). At the same time, they are constructed as havens from broader society. As captured, for example, in the idea of the 'paradise papers', they are the places in which offshored capital is shielded from investigation. On islands, individuals are constructed as "free from both the constraints and the comforts of civilization" (Hertzberg, 1997). They are places apart, places bespoken by "splendid isolation and aura of timelessness" (Gillis, 2004, p.2).

As in the case of ice, however, climate breakdown is destabilising these longstanding meanings of islands. Today, small islands are seen as a front line with climate breakdown. Small islands in the Anthropocene - again like glaciers and

icebergs - are constructed as vulnerable and threatened. A new Anthropocene cultural model of small islands emerges. This new cultural model is grounded, of course, in the real fate of small islands today. The pacific nation of the Solomon Islands has already lost five uninhabited islands to rising sea levels[118]. Other places like the Maldives and Tuvalu are under threat. Camilla Asplund Ingemark argues that the “image of sinking islands occupies such a prominent place in the contemporary representation of climate change” (2019, p.199) and is “compelling to the Western imagination” (Ibid). At the heart of this reinterpretation of small islands in the Anthropocene is a key reversal. Today, because of climate change and rising sea levels, small islands are understood not as disconnected from wider global phenomena but, instead, as profoundly connected to them. It is consumption and emissions originating in urban cores around the world that is ultimately largely responsible for the inundation of small islands by rising sea levels.

It is in this context that I find a recent iteration of the desert island cartoon trope particularly interesting. I will first present a number of examples and then discuss them.

[118] The Guardian (2016) ‘Five Pacific islands lost to rising seas as climate change hits’, *The Guardian*, 10 May. Available at: https://www.theguardian.com/environment/2016/may/10/five-pacific-islands-lost-to-rising-seas-as-climate-change-hits (Accessed: 16 March 2025).

[119]

Figure 18: (Amorim, 2021) desert island cartoon 1

[119] Amorim (2021) Desert Island cartoon in times of global warming [cartoon] 14 July. Available at: https://www.cartoonstock.com/cartoon?searchID=CX912694

[120]

Figure 19: (Carter, 2016) desert island cartoon 2

[120] Carter, J. (2016) *Post Global Warming Desert Island Cartoons* [cartoon] 23 November. Available at: https://www.cartoonstock.com/cartoon?searchID=CS138007

121

Figure 20: (Lynch, 2019) desert island cartoon 3

In these cartoons, the cartoonists playfully suggest that climate change and rising sea levels are breaking the desert island trope. Once again, they do this by means of a blend. Elements of the Holocene cultural model of the desert island are recognizable. These are the standard elements of the conventional cartoon still visible. In all of these examples, this includes the palm tree protruding from the sea.

[121] Lynch, M. (2019) *Rising sea levels are threatening the genre of desert island cartoons* [cartoon] 2 April. Available at: https://www.cartoonstock.com/cartoon?searchID=CS483802

In these cartoons, the castaway is also visible, but in different ways. In one instance, he (it is almost always a he) has clambered up the trunk of the tree to escape the rising waters. In other examples, he stands partially submerged by the rising water. In one case, it is only the very top of his head that is left visible. There are many more example beside the ones presented here. In one notable example, the castaway is visible only metonymically in the glimpse we are given of the top of a speech bubble. In all cases, however, the fundamental point is the same - the conventional trope of the desert island cartoon and the cultural model of desert islands upon which it rests is, increasingly, destabilized by climate breakdown and rising sea levels. The new Anthropocene cultural model of desert islands is, of course, represented by the sea level and by the inundation of the sandy island we are accustomed to seeing in the conventional version of the cartoon. The blend, then, works according to this paradigm:

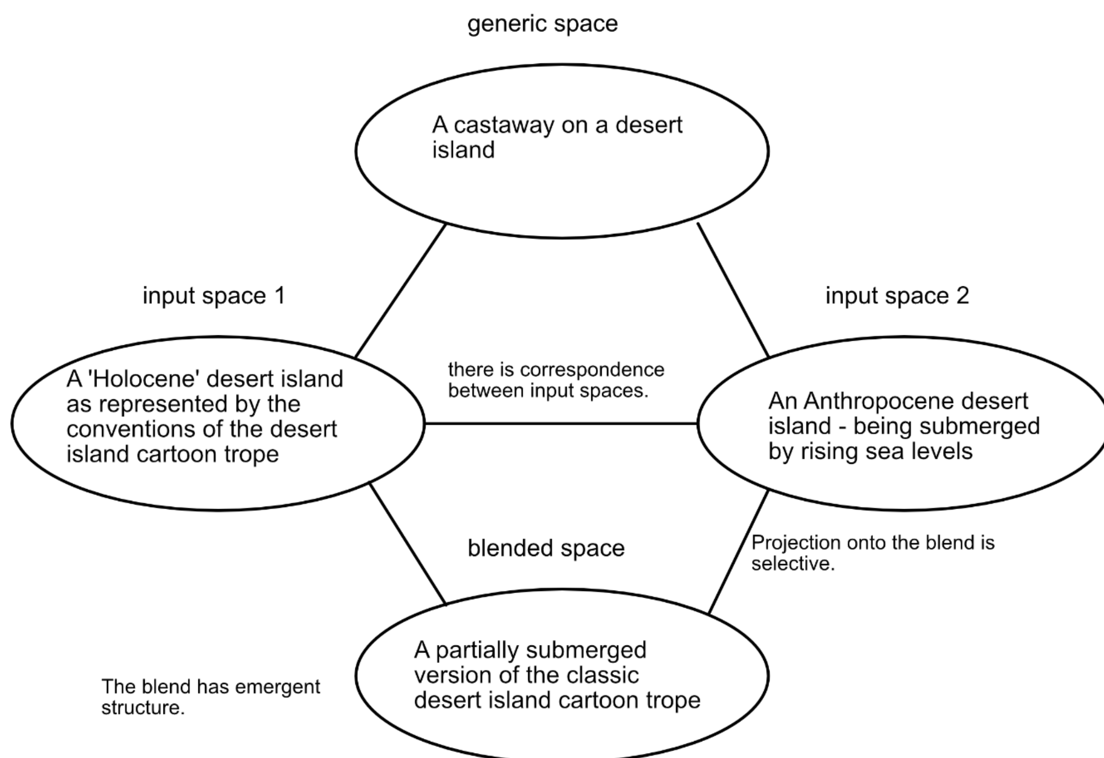

Figure 21: desert island blend

These cartoons, then, blend deeply conventionalized Holocene and (relatively) novel Anthropocene cultural models of climate breakdown in order to communicate the profound effects of climate breakdown. The cartoon trope is revealed to be a kind of ecocultural anachronism, relying, as it does, on an increasingly unstable imaginary of desert islands. A similar dynamic underlies the next example but in relation not to the cryosphere or seal levels but to extreme heat.

5.8 Extreme Heat: An Intemperate Summer's Day

Robert Markley describes William Shakespeare's eighteenth sonnet as "hyper-canonical" (Markley, 2008, p.131). In a nationwide survey conducted in the UK to coincide with the country's National Poetry Day, Shakespeare's eighteenth sonnet was voted the greatest poem of all time with almost 20% of the vote[122]. The poem begins with what is likely the most famous line in Western poetry: "Shall I compare thee to a summer's day?" (Shakespeare, n.d.) So famous is this line that it approaches something like a metonym for love poetry or, even, for poetry in general. Because the poem is a staple of Western school curricula, the internet is replete with basic SparkNotes style analyses of it (often produced by AI). Among these basic analyses a keyword that recurs is 'timeless'. The poem is described as a "timeless piece of literature[123]" and "a timeless expression of admiration"[124]. The rhetorical question with which it opens is described, meanwhile, as a "timeless question"[125]. If the *Titanic* is the paradigmatic conventional metaphor for disaster, and the desert island trope is the ultimate convention in cartooning, then the opening line of Shakespeare's eighteenth sonnet fulfils a similar role in the world of poetry.

[122] Yorkshire Times (2021) 'Shakespeare's Sonnet 18, Voted The Greatest Poem Ever Penned', Yorkshire Times, 9 October. Available at: https://www.yorkshiretimes.co.uk/article/Shakespeares-Sonnet-18-Voted-The-Greatest-Poem-Ever-Penned (Accessed: 18 March 2025).
[123] Brainly (n.d.) Sonnet 18 by Shakespeare. Available at: https://brainly.com/topic/english/sonnet-18-by-shakespeare (Accessed: 18 March 2025).
[124] OnlyArt (n.d.) Shakespeare's Sonnet 18: Shall I compare thee to a summer's day?. Available at: https://onlyart.org/poets/william-shakespeare/shall-i-compare-thee-to-a-summer-s-day-sonnet-18/?srsltid=AfmBOooHyTIG39RPnlxPCaIIHDIlhQXrHnvGFw3EJtlh71G_f7IF5Dou (Accessed: 18 March 2025).
[125] Aithor (n.d.) *Sonnet 18 by William Shakespeare: Essay*. Available at: https://aithor.com/essay-examples/sonnet-18-by-william-shakespeare-essay (Accessed: 18 March 2025).

This opening question, and the entire poem, relies on a particular cultural understanding or model of summer. Specifically, it relies on a British literary trope of summer grounded both in classical tradition and informed by the climatic realities of late sixteenth century England (the time and place in which Shakespeare composed the piece). Ferber unpacks some of the meaning of this literary trope of summer. Summer is constructed as the season of abundance and joy. It is the time of full flowering. It is, he says, in the temperate zones, the “most pleasant” season (2017, p.209). In Vendler’s terms a summer’s day is “the most beautiful thing, the summum bonum, in an (English) world” (Vendler in HUP, 2020). In Northrop Frye’s grand theory of Western literature, meanwhile, he maps the season of summer to what he terms the mythos of Romance (Frye, 1971, p.186). Summer, then, is a sort of taken-for-granted, stable reference point for literary explorations of romantic love. Over recent years, however, the timelessness and certainty of this relationship has come under question. Various scholars and writers have noted that the taken-for-granted and timeless cultural model of summer to which Shakespeare refers is, in fact, more local and contingent than is often acknowledged.

In the first instance, this reappraisal was post-colonial in nature. There is an interesting mini-literature, for instance, that explores the experience of school students encountering Shakespeare’s famous Sonnet 18 rhetorical question in places far from Britain’s temperate summers. Neil Graves describes the experience of students in Botswana reading Shakespeare’s eighteenth sonnet. In comparing his unnamed lover to literary summer, Shakespeare says that she is “more lovely and more temperate” (Shakespeare, n.d.). Referencing this famous comparison, Graves writes that “a Botswana summer is certainly not lovely or temperate” (Graves, 2015, p.30). Graves explains that a Western reader immersed in a Western cultural context immediately “understands the iconic connotations of lover and summer” (Ibid). This reference point does not hold in Botswana, however. Graves writes that “none of this makes sense working within Botswana’s symbolic epistemes” (Ibid, p.31). Mongi Bahloul recounts a similar dynamic from Tunisia. When seeking to teach the sonnet in the Tunisian city of Kairouan - where, in the summer of 2021, a weather station recorded a temperature of 50 degrees Celsius - Bahloul describes encountering the mismatch between the poem’s basic comparison and the life experience of his students. The words Bahloul’s students associated with summer include “heat”,

“illness”, “mosquitoes” and “sweat” (1998, p.89). In Tunisia, Bahloul explains, to compare someone to the summer would be to characterise them as “intolerable” (Ibid). Finally, Sumana Roy makes the same point in an Indian context. She asks us to imagine reading that famous opening line in an Indian “summer classroom where two aged and feeble ceiling fans battle perspiration and expiration” (Roy, 2017).

In these accounts, recontextualization of the poem ruptures the reference it relies on. The timeless, taken-for-granted model of literary summer underpinning it is shown to be a local (rather than a universal) phenomenon. These recontextualizations, it should be noted, are themselves blends. From one input space, we get Shakespeare’s basic structure of comparison of a romantic partner with (British) summer. From a second input space, we get the character of summer in Botswana, Tunisia or India. In combination, in the blend, we get a novel structure: by comparing his partner to this kind of intemperate summer, Shakespeare is insulting her.

These recontextualizations are, of course, all geographic in nature. What I am interested in, however, is the recent emergence of analogous recontextualization of this famous comparison, not in space but in time. Because of climate breakdown, summer in the Western tradition begins to take on new Anthropocene meanings. Writing in *Scientific American* during the summer of 2024, Andrea Thompson says “The face of summer is transforming” (Thompson, 2024). In terms of periods of extreme heat, Thompson says, “summers are dramatically ramping up” (Ibid). Climate change has fundamentally transformed the character of Western summer. “In short,” writes Thompson, “The milder summers of our parents and grandparents are a thing of the past” (Ibid). Summer has gone from ‘lovely’ and ‘temperate’ to dangerous and menacing. Michelle Nijhuis writes in the *New Yorker* in 2022 about the changing character of summer. In a September essay she asks, “Are we approaching the end of another summer, or the end of summer as we know it?” (Nijhuis, 2022). In summer 2023, for instance, 2,300 people in the United States died from excessive heat: the highest in the 45 years of recording[126]. Summer in the UK,

[126] Selig, K. (2024) ‘Heat kills thousands in the U.S. every year. Why are the deaths so hard to track?’, *The New York Times*, 23 August. Available at: https://www.nytimes.com/2024/08/23/heat-kills-thousands-in-the-us-every-year-why-are-the-deaths-so-hard-to-track.html (Accessed: 18 March 2025)

where Shakespeare penned his famous lines, is also changing rapidly. 2022 was the first year in which a temperature above 40 degrees Celsius was recorded in the UK[127]. These changes upend the traditional Western literary associations of the season. This upending is encapsulated in a campaign by the Union of Concerned Scientists who have proposed naming the period from May to October in the US 'danger season'[128] because it has become synonymous with threats ranging from forest fires to drought and hurricanes to heatstroke.

Anthropocene summer, then, carries entirely different cultural connotations than does Shakespeare's Holocene summer. There is, in other words, an emerging Western Anthropocene cultural model of summer which is at odds with the traditional Holocene model. Several writers have leveraged this mismatch, this bisociation to re-version or trouble Shakespeare's famous poem so as to communicate the uncanny effects of climate breakdown. Peter Friederici, for instance, uses the bisociation as a rhetorical device in his prose. He writes,

> "Shall I compare thee to a summer's day? Yes, please, if you're a poet on a predominantly chilly island just coming out of the Little Ice Age. If you're on the same island four centuries later with record breaking heat waves melting asphalt and buckling rail lines, April or October might be a more romantic touchstone" (Friederici, 2023, p.55)

Friederici, then, effectively replaces the Earth / Holocene summer in the original line with the new Eaarth / Anthropocene summer. The result is that the famous quote, as in the geographic recontextualizations comes to denote almost its precise opposite.

Catriona Patterson, former Creative Carbon Scotland's Green Arts Project Manager, uses essentially the same rhetorical trick to begin her TEDx talk. Patterson begins by quoting the opening to Shakespeare's eighteenth sonnet before pointing out how "Shakespeare calls upon our physical environment to woo his lover" (Patterson,

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[127] Carrington, D. (2022) 'Day of 40C shocks scientists as UK heat record "absolutely obliterated"', *The Guardian*, 19 July. Available at: https://www.theguardian.com/environment/2022/jul/19/day-of-40c-shocks-scientists-as-uk-heat-record-absolutely-obliterated (Accessed: 18 March 2025)

[128] Union of Concerned Scientists (no date) *Danger season*. Available at: https://dangerseason.ucs.org/ (Accessed: 18 March 2025)

2018). Patteson goes on, however, to warn that “In the future, ‘summer days’ might not be quite so lovely” (Ibid). Patterson uses this troubling of Shakespeare to demonstrate “just how ingrained are our culture and our climate” (Ibid). Again, Patterson swaps an Anthropocene construction of summer in for a Holocene one and, in so doing, demonstrates that the concept of summer has become bisociated. For a moment these two contradictory constructions of summer sit in tension with one another. Then, in a higher moment of synthesis, the tension is resolved as we realise that what Patterson is showing us is that the very reference points around which we organize our culture are coming unmoored.

In other instances, writers actively reimagine the words of the poem. In these cases, by replacing the usual Holocene summer with an Anthropocene one, they are required to flip the ‘answer’ to the initial question such that it is in the negative rather than affirmative. As example, in 2023, the *New York Times* asked its readers to submit variations of famous pieces of writing. They published those deemed to be the best. One of these was a climate related reworking of Shakespeare’s famous sonnet. In it, Joel Watson writes “Shall I compare thee to a summer’s day? / That likening hath never been less apt / Today our summers kindle flood and flame, / To which humanity might not adapt…” (Watson in The *New York Times*, 2023) In another instance, Niloufar Behrooz, in a piece in the *Journal of Parody Poetry* writes “Shall I compare thee to a summer’s day? / With due respect to Shakespeare, I shall not” (Behrooz, 2019). Her second stanza begins: “Maybe the bard lived in a different time / When summers were still ‘temperate’ and nice” (Ibid). In his book on metaphor, J. David Sapir uses Shakespeare’s eighteenth sonnet to demonstrate how a conventional metaphor can be made to produce a novel one via inversion. He writes that “By taking certain liberties with our literary heritage, and by systematically inverting the shared features … we can produce an inverted ‘variant’ of the poem” (Sapir and Crocker, 2016, p.26). He makes these inversions and writes: “shall I compare thee to a winter’s day? / Thou art more ugly and less temperate” etc. (Ibid). The examples I have cited here are, like Sapir’s, inversions of the original. What is remarkable about these examples, though, is that they do not require summer to be inverted into winter. Instead, the cultural meaning of summer is inverted when recontextualized in an Anthropocene setting. They are, then, at once inversions and not.

As a final version of this dynamic, climate change campaign group The Climate Coalition used the poem to launch their '#ShowTheLove' campaign. They had a series of British celebrities read the poem. As the poem was read out, it was juxtaposed against "images of crashing waves and swaying trees" (The Climate Coalition, 2015). At the end of the poem, a message on-screen reads "What felt eternal is changing" (Ibid). In all of the above cases, the supposed timelessness of the summer invoked in Shakespeare's sonnet is troubled and called into question. The blend in these examples works along these lines:

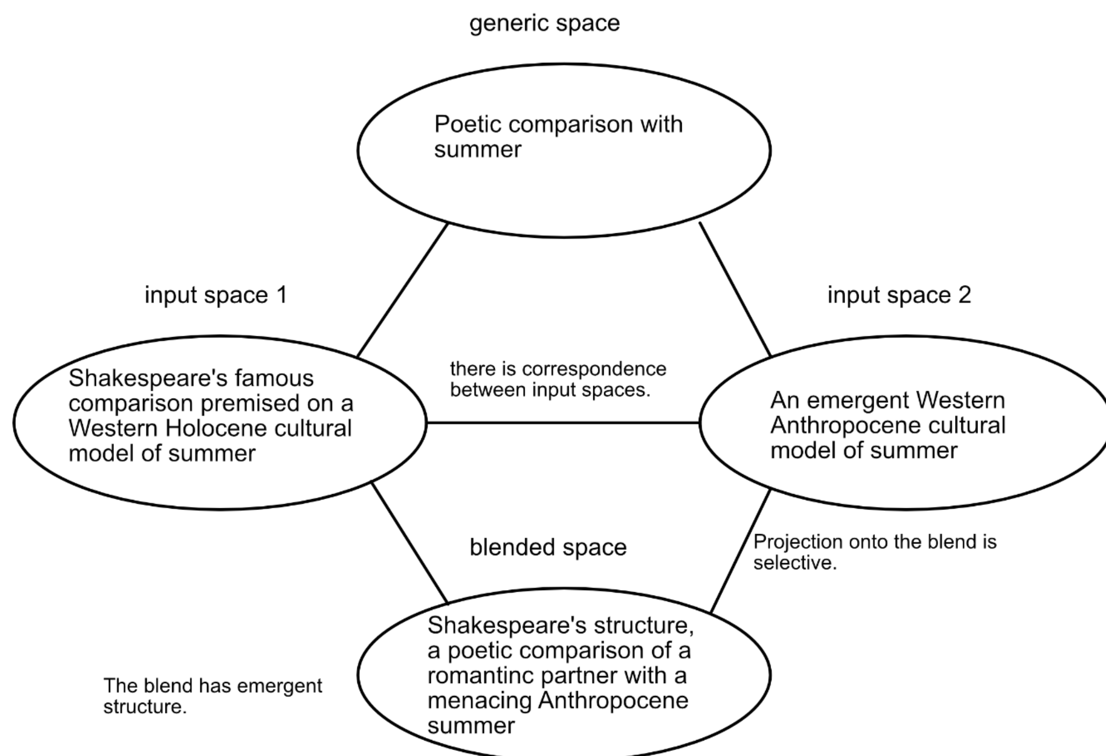


Figure 22: summer's day blend

Each of these three examples I have presented works in essentially the same way. A deeply conventionalized unit of culture is shown not to be timeless but, instead, to have relied on a local and contingent aspect of Holocene nature. The deeply backgrounded, second nature, knowledge tied up in that conventionalized piece of culture is unbackgrounded as we are shown that we possess a second, contradictory

and novel bit of background knowledge about the same natural phenomenon. What was previously seen as a seemingly timeless reference point relationship is ruptured. The totally taken for granted is called into question. We experience climate breakdown in our second nature as we realize that these conventionalized units of culture have been rendered (at least partly) anachronistic. These three examples provide, I argue, a valuable template for thinking about how to communicate climate breakdown. The effect produced by puncturing such a deeply backgrounded convention is a powerful one. In a flash of recognition, that which is backgrounded is suddenly foregrounded. The utterly familiar suddenly appears strange. What seemed like (second) nature is revealed in an instant to have always been cultural and, therefore, provisional.

In the next section, I turn from looking at the ‘breaking’ of these Holocene conventions to looking at the paradoxical and contradictory products that emerge from such breakings. Once these units of culture are ruptured, they become, I argue, not nonsensical, but instead, take on an uncanny new kind of meaning. In the following section, I provide an example of that with reference to the *Titanic* example previously mentioned:

5.9 Running the Blend - The Anthropocene *Titanic*

Recall that one of the key features of conceptual blends is that the blends themselves function as simulations of a sort. So, for instance, in the pronghorn blend, though we know that no pronghorn has ever been chased by a ghost, we can ‘run’ that blend in order to gain insight. In other words, taking the blend at face value can produce real-world insight even where the blend is clearly, in a literal sense, absurd.

The *Titanic* example I have presented offers an interesting illustration of how running a (somewhat) absurd blend can offer us insight on climate breakdown. When we elaborate the basic message of the blend, we see that it is at once absurd and, at the same time, a coherent, even profound, account of the position of humanity in the Anthropocene. The basic premise of the blend is that the obstacle, the iceberg, is

either removed or decreased to a trivial “ice cube”. As such, it no longer threatens the *Titanic* (or its reincarnation) and yet we understand this scenario not as depicting a happy situation, the removal of threat, but, instead, as communicating a much greater threat. The *Titanic* is no longer on a collision course with the iceberg but, far from being saved, hubristic humanity is seen to be on a collision course with much more powerful and fatal forces.

We can continue to elaborate. To do so, we must first develop a strong understanding of the Holocene or ‘classic’ *Titanic* story. James Hikins has called the story of the *Titanic* “the paradigmatic disaster of the 20th century” (Hikins in Dew, 1998). Contemplating the cultural space occupied by the story of the *Titanic*, Daniel Mendelsohn writes that “unlike other disasters, the *Titanic* seems to be about something” (2012). As mentioned earlier, the enduring cultural meaning of the *Titanic* incident was seminally recorded in poetic form in the immediate aftermath of the sinking by Thomas Hardy in his occasional poem “The Convergence of the Twain”. I have already introduced the analysis of the event contained in this poem but, given that it is the seminal articulation of what would become the *Titanic* myth, it is worth focusing on some more. In that early reaction, Hardy both captured the prevailing understanding of the disaster and fixed in place the principal features of the parable that have sustained generations of mythologising.

As suggested by its title, Hardy’s poem is one centred around the theme of duality. Hardy imagines the disaster as a symmetrical convergence of two “twin halves” (1912): the ship and the iceberg. He imagines that, at the same time as the enormous ship is being built in a Belfast shipyard, somewhere in the remote distance, its dark twin, the iceberg, is being developed too. He writes, “And as the smart ship grew / In stature, grace, and hue, / In shadowy silent distance grew the Iceberg too” (Ibid). Hardy views the two entities - ship and iceberg - as two halves of a single “august event”, blindly destined to collide in one fateful moment (Ibid). As Hardy puts it, “Alien they [the ship and iceberg] seemed to be; / No mortal eye could see / The intimate welding of their later history, / Or sign that they were bent / By paths coincident / On being twin halves of one august event” (ibid). Hardy’s reading of the story of the *Titanic* - which has become the dominant cultural reading - is that

it was a story about fate. Indeed, the epithet ‘ill-fated’ has become something of a cliché for describing the ship.

Fate is personified in the poem as “The Immanent Will that stirs and urges everything” (Ibid). In her analysis of this figure of the Immanent Will in the poem, Isobel Robin notes that central to the poem are ideas of “equilibrium [or] balance in the scheme of things” (1998, p.79). The ship and the iceberg are mirror images of each other - one a product of nature, the other a product of culture. In Hardy’s conception of the disaster, the two are predestined to collide. Hardy suggests another kind of equilibrium: one that might be thought of in terms of recalibration. He conceives of the collision in not entirely negative terms. Hardy sees it as a moment of re-balancing between humanity and nature. As such, Robin senses in it a note of “strange celebration” (Ibid). The disaster reinstates an equilibrium between nature and culture.

In this reading, the collision, though tragic and shocking, was in some sense supposed to happen. The crash, in this understanding of the disaster, marks the moment at which equilibrium is restored. Humankind’s outsized hubris, encapsulated in the audacity required to refer to the *Titanic* as ‘unsinkable’, is firmly rebuked and brought back into line’. Indeed, almost as soon as the crash happened people began to claim that it had been prophesied. Tim Armstrong says that “Part of the historical resonance of the wreck of the Titanic seems to be its omen-ridden nature, its ability to attract predictions as a gravitational mass attracts matter and (in Einstein’s theories) rearranges the universe about itself” (1992, p30). Analysing Hardy’s poem, Armstrong goes on to wonder whether with ‘august’ in his line “one august event”, Hardy might have wanted to nod at “‘august in its root sense of prepared by augury and brought to fruition” (Ibid). Between its innate symmetry, its prophesied occurrence and its echoes of grand mythic themes, the disaster is loaned an air of fated inevitability - a sense of needing to have happened.

This understanding of the *Titanic* story’s cultural meaning accords with a broader kind of cultural understanding of shipwreck that stretches back into antiquity. Hans Blumenberg in his book-length study of the metaphor of shipwreck outlines the principal features of this understanding. Blumenberg writes that seafaring has long

been constructed as “a transgression of boundaries” (1996). He refers to “The ancient suspicion that underlies the metaphorics of shipwreck: that there is a frivolous, if not blasphemous, moment inherent in all human seafaring” (Ibid). In taking to the seas, humans are seeking to connect lands that “a divinity has sundered” (Ibid). The sea, in this sense, ought to be understood, Blumneberg argues, as “a naturally given boundary on the realm of human activities” (Ibid). Seeking to overcome this natural boundary is a demonstration on the part of humankind of a prideful “refusal of nature’s meagre offerings” (Ibid). Blumenberg contends that the story of the beginning of human seafaring is often told in a way that rhymes with or echoes the narrative of the fall from Eden. In these tellings, seafaring is “misstep into the inappropriate and the immoderate” (Ibid). Shipwreck, meanwhile, is the justified, recalibrating wrath of a scorned God. In a sense, then, if seafaring is a product of humanity’s unnatural desire to move beyond its proper realm, shipwreck is the natural, appropriate end result. Blumenberg puts it like this: “In this field of representation, shipwreck is something like the ‘legitimate’ result of seafaring, and a happily reached harbour or serene calm on the sea is only the deceptive face of something that is deeply problematic” (Ibid).

According to this scheme, the story of the *Titanic* is surely, then, the paradigmatic story of shipwreck: it takes each of the component elements as set out by Blumenberg and raises each in turn, almost to the point of hyperbole. If seafaring and shipwreck are metaphorical stand-ins for pride and fall, then they find their fullest articulations as such in the story of the *Titanic*. Blumenberg reads seafaring in general as humanity’s prideful affront to nature or God. The very word *Titanic*, meanwhile, in the words of Tim Bergfelder and Sarah Street, “has entered vernacular language to become a byword of … human hubris” (2004, p.16). For Blumenberg, the narrative of shipwreck is a retelling of the original Biblical story of the fall from Eden. Interestingly, the story of the *Titanic* is often associated with the Genesiac theme of the loss of innocence. Elisabeth Wenno notes this - she calls the ship “a fitting metaphor of the Western world headed for disaster on the ‘unsinkable’ ship of innocence” (Wenno, 2006, p.147). The sinking of the ship marks a turning point at the outset of modernity. Faith in progress and the promise of technology is delivered a major blow. Just two years later, that most Modern and brutal of conflicts,

the first world war, would break out. The *Titanic* disaster marked the end of the old world and the beginning of a new one.

Narratives of shipwreck in general and of the *Titanic* in particular, then, tell the story of the restoration of equilibrium. Humanity's folly is unambiguously answered. This understanding of the *Titanic*'s cultural meaning allows us then to comprehend how the idea of the ship not hitting the iceberg might be thought of in terms of something going wrong, something out of phase. Indeed, this idea has been explored before. In the 1989 film *Ghostbusters II*, for example, the *Titanic* makes a cameo appearance as a ghost ship (Reitman, 1989). In the film, a ghostly apparition of the ship lands in New York harbour, depositing a band of bedraggled, ghostly passengers (Ibid). The ship's arrival in New York is one of a number of supernatural set-piece "manifestations" featured in the film (Ibid). One of the film's writers, Harold Ramis, explains that the *Titanic* scene is meant to contribute to the idea that "all hell's breaking loose" in New York city (in Ghostbusters Wiki, n.d.). The world is being turned on its head and the filmmakers turn to the idea of the *Titanic* completing its journey as representation of this.

Slavoj Zizek's reading of James Cameron's hugely popular 1997 filmic depiction of the *Titanic* story, *Titanic*, is also of relevance here. *Titanic* tells the story of the disaster via the device of a fictionalised romance plot between Rose (Kate Winslett) and Jack (Leonardo di Caprio). The pair fall in love during the doomed crossing (Cameron, 1997). Rose, though, is a wealthy first class passenger and penniless Jack, who won his passage in a game of cards, is travelling in third class. Just before the point in the film at which the collision occurs, Rose and Jack begin to imagine their lives together in New York (Ibid). Zizek argues that the iceberg intervenes at this moment to prevent what would have been the true catastrophe: the slow and sad disintegration of the couple's unworkable relationship in America (Fiennes, 2012). Rose and Jack's inter-class relationship knocks the social order out of balance. The iceberg, by preventing the relationship from developing, restores that order. At the end of the film, we see class hierarchy fully reinstated as Rose survives and Jack perishes in the freezing waters of the North Atlantic. The collision with the iceberg, both in the main plot (redressing humanity's runaway hubris) and in the subplot (restoring social order), is, then, a moment of recalibration and reset.

Whether knowingly or not, *Titanic* echoes in its romance plot the basic movements of the main plot. The world is knocked out of phase and then, through catastrophe, order is restored.

It is in this context that I see the reworked Anthropocene *Titanic* - wherein the *Titanic* or its replica encounters ‘no problem’ - as a powerful metaphor for climate breakdown. The Anthropocene *Titanic* proposes a version of the story in which human hubris goes unanswered, in which the world is knocked out of phase but is never recalibrated. The Anthropocene *Titanic* is, fundamentally, a story of asymmetry. The conventional account of the *Titanic* as recorded by Hardy (and scores of others since) is one of absolute symmetry: ship and iceberg, culture and nature, balance and equilibrium. Removing the iceberg from the story destroys this symmetry and allows the central imbalance to persist. Culture appears to vanquish nature, to overcome it. Of course, on a longer timescale, precisely the opposite is, in fact, the scenario that emerges from the modified form of the story. It is, in fact, the case that ‘culture’ is even more profoundly and thoroughly vanquished by a nature increasingly rendered unpredictable.

‘Running’ or elaborating this blend demonstrates the basic point I am interested in underlining here. When the *Titanic* story is ‘broken’ by being recontextualised in the Anthropocene, it is not rendered nonsensical or obsolete. Instead, it can be read as taking on a new kind of meaning as a parable of the Anthropocene, of a world out of phase.

5.10 Discussion: Triggering Recognition through Defamiliarization

The preceding examples might all be thought of as sort of uncanny doppelgangers of hyper-conventionalised Holocene cultural models. Seen in an Anthropocene context, we suddenly realize in a flash of Ghosh’s Recognition that the regularities, patterns or probabilities in nature these compressions took for granted were always contingent. These hyper-conventionalised cultural models constructed nature as

background. These conventions are radically unbackgrounded when set into an Anthropocene context. These preceding examples work on the basis that, fundamentally, we are at a threshold moment between two realities. In this moment, certain phenomena become bisociated - we carry with us two models of glaciers and icebergs, two ideas of summer, two ideas on pacific islands, and so on. These bisociated phenomena function, as with Elizabeth Rush's notion of passwords, like portal through which we can pass from one plane to the other and compressed into which we can see both at the same time. These passwords, in turn, can be mobilised for climate communication, particularly in the form of conceptual blends.

The examples I have presented so far - the 'glacial' metaphor as well as the examples in this chapter- have all revolved around ideas of metaphor or figurative language. That, however, need not be the case. Other kinds of units of culture can act as passwords too. If these Holocene-Anthropocene blends are such potent ways to communicate climate breakdown, then it is important to think about how we might broaden our scope from the examples presented in the this chapter and begin to think in a more general way about where to find or how to make the ecocultural anachronisms and bisociations upon which these blends are built. This is the endeavour I take on in the following chapter.

Chapter 6: Finding and Presenting Holocene-Anthropocene Blends

In the previous chapter, I looked in detail at how instances of ecocultural anachronism can be used to communicate climate breakdown. In this chapter I consider how and where instances of ecocultural anachronism might be found or made.

In this chapter, I consider, systematically, how ‘passwords’ in Rush’s sense might be found or made. As I have shown, such passwords exist on the intersection between two planes, two worlds. As such, in this chapter, I consider where those points of intersection lie. In effect, this chapter activates Koestler’s 1964 theory of bisociation as a methodological framework. It also uses Connie Barlow’s accounts of the discovery of ecological anachronism as a methodological guide in seeking to develop a consistent way of finding instances of ecocultural anachronism.

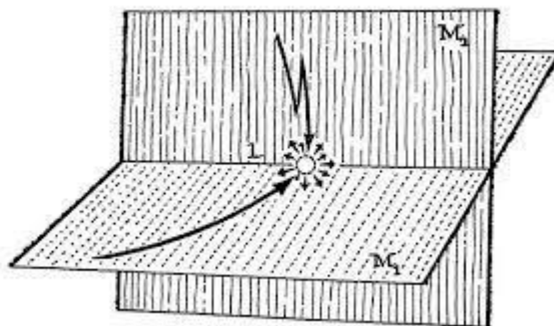
Passwords or Holocene-Anthropocene blends are potent ways to visualize and, therefore, communicate climate breakdown in a compressed, digestible and easily shareable way. Producing such a password, or portal, relies, fundamentally, on finding an instance of bisociation upon which to base it. Rush herself uses the Tupelo tree - whose etymology has come unmoored from its environment. The *Titanic* cartoon, meanwhile, uses the cultural imaginary of icebergs. Using passwords to communicate climate breakdown, then, necessitates first finding such instances of bisociation. There is no formula for finding such instances, but in this chapter I present a guide for locating such instances of bisociation and ecocultural anachronism. First, I consider where in culture instances of these phenomena tend to pool and gather, then I consider how these instances might be mobilised for climate communication.

6.1 Bisociation

Passwords, like Rush's, are Holocene-Anthropocene blends and work, as I have shown, on the basis of bisociation and ecocultural anachronism. Think again of the pronghorn and the Pleistocene-Holocene blend of the pronghorn fleeing from the ghosts of extinct Pleistocene predators. This blend is only possible or necessary because of the fundamental anachronism of the pronghorn's speed, because of the sense in which the pronghorn has come unmoored from its companion world. As such, it is possible to see that bisociation is at the very heart of such anachronisms. They emerge where a single entity or phenomenon straddles two worlds. Finding the raw material for new Holocene-Anthropocene blends, then, is a matter of finding instances of bisociation brought about by climate breakdown. I have already discussed bisociation and so briefly reintroduce it here as context for this chapter.

Bisociation is a forerunner idea to conceptual blending and was developed by Arthur Koestler in his seminal *The Act of Creation* (1964). In essence, The theory of bisociation holds that virtually all creativity - from the writing of a joke to the making of a new scientific discovery - can be understood as seeing some entity or phenomenon in two contexts at the same time (Ibid). A pun is a simple everyday example of bisociation. In a pun, two associative contexts are, in Koestler's terms, tied together by an acoustic knot, by a word (Ibid, p.65). Koestler, however, saw bisociation as underpinning more consequential forms of creativity too. Paradigmatic moments of scientific discovery, he points out, are bisociative in nature. So, for example, when Archimedes notices the water level in his bath rise as he gets in, he sees it from the dual perspectives of the quotidian and the geometric. In a sudden flash of insight, he understands something he has surely seen a thousand times before in a valuable new way (Ibid, p.88). The famous story of the apple that hit Isaac Newton on the head is another example of the same dynamic. Newton perceives the incident from dual perspectives: the immediate and trivial and the cosmic and profound (Geary, 2017). Suddenly, in a spark of creative discovery, he sees the everyday phenomenon of objects falling to the ground in a meaningful new way. In both cases the totally familiar, the routine and habitual, is seen from a new perspective and this leads to great insight.

Koestler diagrams his idea of bisociation like this:



[129]

Figure 23: Koestler's depiction of bisociation

His basic argument is that almost all of our thought is associative in nature, that is that it operates in routinized, habitual patterns and, in so doing, is stuck on one plane (either M1 or M2 in the diagram). However, when we can perceive something at the intersection of two planes, two “matrices of thought” (Koestler, 1964, p.38), we produce a surprising and creative link as we move from the routine single-mindedness of one-plane thinking to the double-mindedness of two-plane thinking. Key to Koestler’s idea is that bisociation occurs where a single phenomenon in seen simultaneously in two “self-consistent but habitually incompatible frames of reference, M1 and M2” (Ibid, p.35). Some phenomenon or other, Koestler continues, is “made to vibrate simultaneously on two different wavelengths” (Ibid). That which is bisociated serves as bridge or portal through which to move back and forth from one plane to another. Think here of Elizabeth Rush’s notion of passwords again. She describes such passwords as portals through which to move between an old world and a new uncanny one. Tupelo, in her case, is bisociated between an old context (M1) in which its etymology and its environment are aligned and a new one (M2) in which they are not. Bisociation is the necessary prerequisite to producing conceptual blends. Think of the pronghorn blend: the animal is bisociated into a Pleistocene pronghorn on the one hand and a Holocene one on the other. As per Koestler’s diagram, the pronghorn sits on the junction between M1 and M2 where M1 and M2

[129] (Koestler, 1964)

are Pleistocene and Holocene. This bisociation then provides the two input spaces which contribute to the ultimate blend - the pronghorn chased by Pleistocene ghosts.

As stated earlier, I read the advent of Eaarth or of the Anthropocene is a sort of ur-bisociation of the world. We sit, then, at a threshold between two worlds. We are, in other words at the junction between two planes, between M1 and M2. The Anthropocene or Eaarth emerges as a sort of uncanny doppelganger of our old familiar world and, within it, various aspects of nature find their own dark twins. The key to finding examples of ecocultural anachronism, then, is finding instances of bisociation where M1 and M2 equate to Holocene and Anthropocene. Nowhere does Koestler provide a step by step guide on how to find or generate instances of bisociation, but he does provide some useful hints. At one point, for example, in talking about how to reverse engineer instances of humour based on bisociation, he suggests beginning by “discovering the type of logic, the rules of the game that govern M1 and M2” (Ibid, p.64). He notes that “Often these rules are implied, as hidden axioms, and taken for granted” (Ibid). Next, he says, one must “find the ‘link’ - the focal concept, word or situation” which is bisociated between M1 and M2 (Ibid). This focal concept might be thought of as the password. Broadly speaking, this serves as a blueprint for finding instances of ecocultural anachronism.

6.2 Defining the Rules of the Game

The first step, then, has to do with how we might think about defining the ‘rules of the game’ that apply to M1 and M2, or, in our case, to Holocene and Anthropocene. To understand what this means, we can, again, look to examples of ecological anachronism and to the idea of Pleistocene-Holocene blends. Connie Barlow, drawing on work done by John Byers, considers the ‘rules of the game’ as they pertain to ecological anachronism. She describes how Byers hit upon the fundamental characteristic of Pleistocene-Holocene ecological anachronisms: organisms left over from the Pleistocene appeared, in the Holocene, to be “overbuilt” (Byers in Barlow, 2000, ch.1). Anywhere that an organism seemed oversized, over-tough, over-fast, or in some other way overbuilt, evidence should be sought for

ecological anachronism. Why is the pronghorn so fast, why is the avocado stone so large etc? As Barlow says, “It is the overbuilt quality of biological structures, physiologies, or behaviour that nudges us to look for missing partners” (Ibid). What Byers hit upon with this notion of being ‘overbuilt’ is essentially a kind of ‘rules of the game’ for M1 and M2. The Pleistocene was a tougher world with bigger, faster and stronger mammals and, so, what was well adapted to the Pleistocene (M1) is overbuilt in the Holocene (M2). In Fauconnier and Turner’s terms, the Pleistocene might be thought of as a ‘bad neighbourhood’ when compared with the relatively mild Holocene.

The challenge, then, is to consider what the Holocene-Anthropocene equivalent to being ‘overbuilt’ might be. Because the Anthropocene is so new and still emerging, there isn’t a single uniform answer that works in quite the same way or to quite the same extent as the idea of being ‘overbuilt' does in the case of ecological anachronism. One promising candidate, however, has to do not with build, but with temperature. The Pleistocene was a tougher ‘neighbourhood’ than the Holocene. Equally, perhaps the key defining feature of the Anthropocene is that, because of global warming, it is warmer than the Holocene. The pronghorn’s genetics are ‘overbuilt’ for a tamer Holocene world. Might it, then, be said, that Holocene memetics are ‘too cold’ for the Anthropocene?

6.3 Warming

Global warming is, of course, one of the signature features of the Anthropocene and of climate breakdown. The Earth’s average surface temperature has increased by about 1.1 degrees since the industrial revolution (Adler et al., 2022). Importantly, this is an average increase and increases have been even greater locally, particularly near to the poles (Ibid). This fact, then, to use Barlow’s terms, should ‘nudge us to look’ for ecocultural anachronism wherever units of culture are coupled to cold temperature in some way. M2 (Anthropocene) is warmer than M1 (Holocene), this is one version of the ‘rules of the game’.

Earth's cryosphere offers perhaps the clearest single example of where these units of culture might be found. This is particularly the case in the most vulnerable areas. For example, where winters are warmer such that an average 1.1 degree increase in temperature simply eliminates ice or snow as a feature of winter almost entirely, or in arctic and sub-arctic zones where polar amplification has led to even greater warming of up to 3 or 4 degrees in places (Ibid). Looked for in these places, ecocultural anachronisms are to be found. In places where mean winter air temperatures tend to hover in the low single digits, the rise in global temperatures to date is enough to dramatically alter the face of winter, particularly where snow and ice is concerned. As such winters that were normal, or within the normal range, for the Holocene become virtually impossible in the Anthropocene. Some specific examples will help to illustrate this.

6.4 Cryosphere anachronisms

Several of the examples already discussed constitute cryosphere anachronisms. Take, for instance, the case of the Northwest Passage cruise already discussed

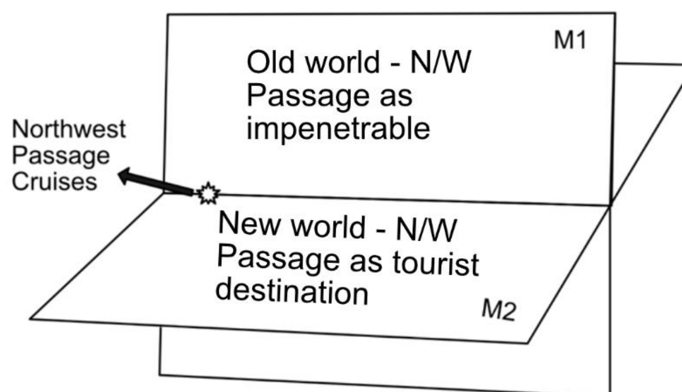


Figure 24: bisociation of Northwest Passage cruises

These cruises can be thought of as existing at the intersection of two matrices - a Holocene and an Anthropocene matrix. The predominant difference in the 'rules of the game' that govern each fundamentally has to do with global warming. Promotion for the cruises discursively relies on recourse to a construction of the Northwest

Passage that climate breakdown has rendered at least partially anachronistic. At the same time, the fact that the cruises can occur at all speaks to a novel version of the Northwest Passage brought about by global warming. As such, the cruises and their promotional literature sit at the junction between two worlds. The ‘glacial pace’ example and the example of the Anthropocene *Titanic* are also both cryosphere-related examples. When one begins to look for more examples related to the cryosphere, one finds that there are many.

We can see this pattern repeated with other aspects of the cryosphere. Wolfgang Behringer, for example, recounts a tradition from Lake Constance which began in the winter of 1573 (2009, p.90). On that occasion, the lake had frozen over completely. An ice procession was held in celebration of the event in which a bust of St John was carried by the people of Munsterlingen, on the Swiss side of the lake, to Hagnau on the German side. The statue was installed in Hagnau to be carried back across the lake the next time it froze over. This tradition of bringing the idol back and forth between the two communities grew into an important cultural practice (Ibid). Lake Constance develops a solid covering of ice only when temperatures reach about -20 degrees Celsius and remain that low for a period of time (Ibid). The probabilities involved were such that the statue would be moved once or maybe twice per lifetime. Behringer describes how the lake froze completely twice in the seventeenth century, once in the eighteenth, twice in the nineteenth and once in the twentieth. Since 1963, the bust of St John has been in Munsterlingen, awaiting its return crossing (Ibid).

It may, however, never make this return journey. According to research by Sapna Sharma and colleagues, it is unlikely that Lake Constance will ever freeze over again (Sharma et al. 2021). They write that “not a single climate model forecast that Lake Constance would ever freeze again” (Ibid, p.6). As a result, the statue, and the tradition that grew up around it, are, in effect, stranded. Details of the tradition are written on the statue’s plinth. As a consequence, it is doomed to be caught forever between two worlds. It will remain in Munsterlingen but it is always haunted by the idea of its return journey - and the alcove in the church at Hagnau that housed it is haunted, too, by its absence. It transpires that the tradition of the ice procession was one that was premised on a contingent Holocene probability - that central Europe would be cold enough for Lake Constance to freeze over once or twice per century.

In the Anthropocene, a degree or two of warming means that this probability goes, more or less, to zero and so the tradition is rendered ecologically anachronistic. Like the pronghorn and its speed or the snowshoe hare, the bust is rendered an entity unmoored from its companion world, out of time. The Bust of St John is essentially biscoiated, it is, at once, waiting for its return journey and, at the same time, in its final resting place. The statue sits at the junction of Holocene and Anthropocene, of M1 and M2. It becomes a password between two realities. It is a symbol of folk tradition in its conventional Holocene context and a ghostly and uncanny symbol of a lost world in its contemporary Anthropocene context. As such, it becomes a powerful way of compressing climate breakdown into a single, human-scale narrative. In the figure of the 'stranded' statue, we can glimpse the planetary scale phenomenon of climate breakdown.

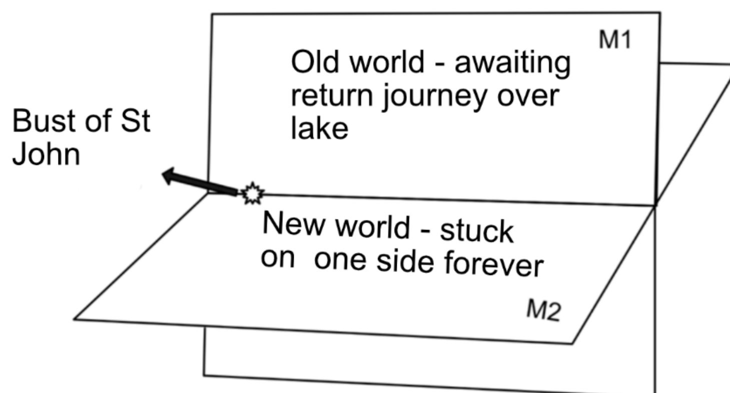


Figure 25 The Bust of St John is stuck between two worlds

6.5 The Elfstedentocht

The Dutch tradition of Elfstedentocht provides another similar example. Traditionally, this 135 mile ice skating event linked eleven cities (as captured in its name) via natural skating routes (Kenyon, 2024). A century ago, the probability that the ice would be thick enough and last long enough for the event to take place stood at around 20% (Ibid). In other words, the event happened roughly once every five years. Today, however, warmer winters mean that probability has dropped

dramatically . The last traditional Elfstedentocht took place in 1997 and there is no sign of its return (Ibid). Many now believe that conditions will never again allow for the event to take place. In fact, an 'Alternative Elfstedentocht' has been held annually in Austria since 1989 (Ibid). The higher elevation of Austria's Weissensee provides better certainty to organizers. Already, then, there is ecocultural anachronism contained in the event's name – no longer are 11 Dutch cities linked by the event.

Once again, though, I am interested in finding the haunted, eerie image that joins together the two planes of Anthropocene and Holocene. I find it in a 2024 BBC report. This report is on the role of a man named Wiebe Wieling. He has the annual task of organizing the traditional Elfstedentocht - despite the fact that there is almost no chance of it ever occurring (Ibid). He and a team of volunteers, every year, prepare for an event with thousands of imagined participants, millions of imagined visitors and which takes place across the geographic scope of an entire nation. This is despite the fact that conditions mean that the event almost certainly won't take place. Wieling's efforts take on a Beckettian or Kafkaesque uncanniness - the planning seems essentially caught between two worlds, it is bisociated. The team plans for an event allowed by Holocene probabilities that has become highly unlikely in the Anthropocene. The image of the planning team, its office and its filing cabinets and so on join together two planes. In a Holocene context, the planning efforts are sensible and useful. In an Anthropocene context, however, they seem eerie and uncanny.

The bust of St John in Munsterlingen waiting for its return journey or the work of the Elfstedentocht planning committee are both examples of phenomena that look increasingly anachronistic and out of time. Modelled in both of them is Holocene probability that no longer holds. As such, like the pronghorn or the snowshoe hare, they have become unmoored from their companion world. Fundamentally, they are not - like the pronghorn - overbuilt but, instead, might be thought of as too cold - that is, they are adapted to a world of lower temperatures. As a result, they take on a new uncanny air of simultaneous familiarity and strangeness. At once, they are familiar, the stuff of traditions and, at the same time, monuments to an uncanny new world.

6.6 The Southern English Cryonarrative

Snow in England provides a final example along the same lines. Having endured centuries of colder than average weather through the years of the so-called Little Ice Age (a cooler than usual Holocene climatic interval lasting from the 16th to the 19th centuries[130]), England (along with the wider region) experienced a significant period of warming from the late nineteenth century until around 1946[131]. Then, from 1947 until roughly 1980 England and the wider region entered a new period of cooling[132]. This cooling was less dramatic than the cold experienced during the Little Ice Age but was significant enough to mean that scientists were split well into the twentieth century as to whether the planet was headed for a longer-term period or warming or of cooling[133]. Beginning with a particularly severe winter in 1947, many of the winters through the mid twentieth century were characterized by cold temperatures and heavy snow. Indeed, a recent thread on the Netweather Community forum discussion website titled "Southern England snow 1947-1978" begins with the observation that "It's definitely been many people's observations that "proper" snow (with a good, reasonably thick covering and lasting at least 2 days) has become very rare in southern England since the winter of 1987/88"[134]. In another online forum, another poster makes this anecdotal observation: "I remember when I was a child during the sixties, snow was very much a part of winter here in the UK … When I tell the kids today how we used to go sledging, make slides and snowmen and have snowball fights every winter, they wish it would snow like that today.[135]" These anecdotal observations are supported by the science. UK Met Office analysis suggests that "by the 2040s most of southern England could no longer see sub-zero

[130] Jackson, S.T. and Rafferty, J.P., (2025). *Little Ice Age*. Encyclopedia Britannica. Available at: https://www.britannica.com/science/Little-Ice-Age [Accessed 19 March 2025].
[131] Brahic, C., (2007). 'Climate myths: The cooling after 1940 shows CO_2 does not cause warming'. *New Scientist*. Available at: https://www.newscientist.com/article/dn11639-climate-myths-the-cooling-after-1940-shows-co2-does-not-cause-warming/ [Accessed 19 March 2025].
[132] Pearce, F., (2006). 'The ice age that never was'. *New Scientist*. Available at: https://www.newscientist.com/article/mg19225822-300-the-ice-age-that-never-was/ [Accessed 19 March 2025].
[133] Ibid
[134] Summer8906 (2022) '[Post in: Southern England snow 1946-78]', Netweather Community Forum, 25 December. Available at: https://community.netweather.tv/topic/98165-southern-england-snow-1946-78-part-1/ (Accessed: 19 March 2025).
[135] stu43t (2007) 'Does it snow less often in the UK now compared with the past?', The Naked Scientists Forum, Available at: https://www.thenakedscientists.com/forum/index.php?topic=12140.0 (Accessed: 19 March 2025).

days" (Rowlatt, 2020). The result, the Met Office suggests, is that "Snowball fights and sledging could be at risk" and that "traditional winter activities such as building snowmen could disappear" from the UK (Ibid). The increase in global temperatures will likely, by then, be enough to essentially eliminate snow as a feature of the landscape in Southern England.

Bookending the cooler mid-twentieth-century interval are two iconic south of England stories in which snow features prominently. In 1947, to celebrate British Queen Mary's 80th birthday, Agatha Christie wrote a radio play entitled *Three Blind Mice*. After some reworking, this radio play would be retitled *The Mousetrap* and would, in time, go on to become the world's longest running play and something of a British institution[136]. *The Mousetrap* is a locked room mystery set in Monkswell Manor in rural Berkshire, southern England. Snow is the mechanism by which the characters are locked in. In the original *Three Blind Mice*, Christie writes that "Snow was piled five feet high, drifting up against the doors and windows. Outside it was still snowing. The world was white, silent and ... menacing" (Christie, n.d.).

At the other end of the twentieth century cold interval, in 1978, lies Raymond Brigg's children's classic, *The Snowman*. Briggs' book was followed in 1982 by the equally acclaimed animated television film adaptation. The story takes place in a rural area of Sussex near Brighton (again in Southern England). After a heavy night of snowfall, a young boy awakes to a world blanketed in deep white snow. He builds a snowman which magically comes to life and takes him on a fantastical adventure. In a short introduction to the filmed version, Briggs says "I remember that winter because it brought the heaviest snow that I had ever seen. Snow had fallen steadily all night long. In the morning I woke in a room filled with light and silence" (Jackson, 1982).

Snow plays a central role in both of these iconic south of England stories. In *The Mousetrap*, snow plays the role of environmental antagonist and obstacle. In *The Snowman*, through the personage of the snowman, it plays the role of protagonist.

[136] Blackpool Grand Theatre (2022) 'Birthday Gift for Queen Mary – The Mousetrap', Blackpool Grand Theatre. Available at: https://www.blackpoolgrand.co.uk/birthday-gift-for-queen-mary-the-mousetrap (Accessed: 19 March 2025).

These stories, however, as snow disappears from England and, particularly from the south, are becoming ecoculturally anachronistic. They are losing their setting, their companion world. From the 2040s on, the south of England cryonarrative may be totally anachronistic. *The Mousetrap* is the world's longest running play and has been running in London's West End since the 1950s. In St Martin's theatre, where the play is performed, actors must enter the 'snow room' backstage where they are coated in false snow before going on stage[137]. This snow room might be thought of as another of those portals between two worlds. If the UK climate forecasts are correct (and emissions are not radically and quickly reduced), there will, in the not too distant future, be more 'Berkshire' snow produced backstage in St Martin's theatre in most years than in Berkshire itself. The snowstorm at the heart of the play, the mechanism by which Christie's locked room is locked will be essentially impossible. As such, the play will be bisociated: it will function as a straightforward detective story in its Holocene context but have a second eerie meaning as a kind of ghost story in the Anthropocene.

Mark Fisher describes the eerie in terms that match precisely this dynamic. He says that ruins, for instance, feel eerie because they are caught out of time. He says that, in the case of ruins, "the symbolic structures which made sense of the monuments have rotted away" (2016). The snow room backstage at the Mousetrap will, then, become a sort of ruin. Its companion world is disintegrating. At some moment, at some tipping point, it becomes, like the pronghorn, a relic of a previous era.

Moving beyond Europe, this same dynamic is echoed in other parts of the Earth's cryosphere. The Begich, Boggs Visitor Centre southeast of Anchorage, Alaska provides a particularly stark example. The centre was opened in the mid 1980s to those wishing to visit the Portage Glacier. The centre, which replaced a smaller one built in the early 1960s, was constructed as a glacier observatory. The *Daily Sitka Sentinel*, reporting on the centre's opening, wrote that it would "offer visitors a panoramic view of the glacier"[138]. Within just a decade, however, the glacier was

[137] Moss, S. (2012) 'The Mousetrap at 60: why is this the world's longest-running play?', The *Guardian*, 20 November. Available at: https://www.theguardian.com/stage/2012/nov/20/mousetrap-60-years-agatha-christie (Accessed: 19 March 2025).
[138] Daily Sitka Sentinel (1986) 'Glacier Center to Open', Daily Sitka Sentinel, 2 May, p. 13.

experiencing catastrophic retreat[139]. By the mid 1990s the glacier had retreated so far that it was no longer visible from the visitor centre's viewing decks[140]. Google and Tripadvisor reviews of the centre capture the strangeness of this situation. One reviewer writes that they were "going to this spot when there was still a glacier out there"[141]. Another describes the centre as "A powerful feeling place when you know what was there is now gone"[142]. Another states that "Although this visitor centre is still nice, it's subject matter - the Portage Glacier - has receded so far back that this place is fairly irrelevant"[143]. Begich, Boggs is not an anomaly but a harbinger of what is coming elsewhere. The Alaskan Forest service, in a planning document, writes that Juneau's iconic Mendenhall Glacier "is expected to retreat from sight from the Visitor Centre by 2050"[144]. The observation decks of the Begich, Boggs visitor centre represent another Holocene-Anthropocene link. They are, in other words, bisociated. This bisociation produces the paradoxical notion of a glacier observation deck from which no glacier is visible. Once again, this uncanny, haunting image serves as a visual compression of climate breakdown. In a single entity, we see the uncanniness of the situation. Think, again, of Fisher's notion of the eerie. The world in which the observation deck made sense has, in a way, rotted away. The visitor centre remains as a sort of ruin: a monument from an earlier age.

Of course, the 1.1 degrees of warming since the industrial revolution does not exclusively impact on the cryosphere. There are other areas of impact where we can also look for instances of bisociation and ecocultural anachronism. The area of phenology offers another good example. Warming significantly affects plant phenology. In particular, the earlier onset of spring temperatures can cause plants to

[139] Kennedy, B.W., Trabant, D.C., and Mayo, L.R. (2006) A century of retreat at Portage Glacier, South-Central Alaska. USGS. Available at: https://pubs.usgs.gov/fs/2006/3141/pdf/fs20063141.pdf (Accessed: 18 March 2025).

[140] Travel Alaska (n.d.) 'Portage Glacier Area'. Available at: https://www.travelalaska.com/destinations/cities-towns/portage-glacier-area (Accessed 18 March 2025).

[141] Perry, J. A. (2024) Review of Begich, Boggs Visitor Center. Google Reviews. Available at: https://shorturl.at/316kv (Accessed: 18 March 2025).

[142] Hansen, J. (2024) Review of Begich, Boggs Visitor Center. Google Reviews. Available at: https://shorturl.at/316kv (Accessed: 18 March 2025).

[143] Krick, S. (2024) Review of Begich, Boggs Visitor Center. Google Reviews. Available at: https://shorturl.at/316kv (Accessed: 18 March 2025).

[144] U.S. Forest Service (2019) Mendenhall Glacier Master Plan, U.S. Department of Agriculture. Available at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd611378.pdf (Accessed: 18 March 2025).

bloom earlier than they have historically. This has a knock-on effect in which fruiting plants fruit earlier and leaf senescence and shedding occurs earlier. The result is that aspects of culture linked to the presence of certain flowers or fruits (as examples) become decoupled from the actual timescales of flowering or fruiting involved. As a result, these aspects of culture can be rendered ecoculturally anachronistic through the same warming mechanism that impacts the cryosphere.

6.7 Phenological Mismatch of Culture

Lea Sanchez writes in *Le Monde* about how changes in mean seasonal temperatures related to climate breakdown are changing the timing of the wine harvest in France (Sanchez, 2024). The article recounts the findings of research by Thomas Labbé and colleagues which finds that the average start date of the grape harvest season from 1354 to 1987 was 28 September, whereas, in the period 1988 to 2018 that date has moved almost 2 weeks earlier (Ibid). In order to provide the reader with a mental compression - a password in Rush's sense - through which to take in this data, Sanchez turns to a case of ecocultural anachronism. She describes how "In 1792, the Republican calendar named the month September 22 to October 21 Vendémiaire, which translates as 'grape harvester'" (Ibid). In other words, at the time of the French Revolution, the new régime used the relatively stable phenomenon of the wine harvest as referent for the name of one of their ten months. Sanchez goes on, "This time frame is well and truly over," she writes, as the harvest season has moved weeks earlier and shows signs of continuing with that trend (Ibid). The beginning of wine harvest - in fact, the first several weeks of it - now no longer routinely occurs during Vendémiaire. What the Revolutionaries had done in naming their months (for there are others based on seasonal phenomena too, like frost or wind) was to tie an invariable time period in the calendar to what has transpired to be a very variable time period in nature. The name Vendémiaire, it transpires, is an essentially probabilistic wager about nature. As long as those time periods were aligned, that essential probabilistic wager was not obvious but it becomes so once they fall out of alignment.

Emma Rooksby provides another example of phenological mismatch. She recounts how the New South Wales Christmas Bush is falling out of sync with Christmas, when it is usually at its peak flowering. Rooksby, writing in 2023, describes seeing shrub's distinctive red foliage and flowers in full bloom about three weeks earlier than their historic Christmastime peak (Rooksby, 2023). This, she speculates, was the result of "unprecedentedly warm weather in September" (Ibid). Rooksby contends that "All indications are that, with ongoing climate change, the common name of NSW Christmas Bush may become inaccurate" (Ibid). The bush, then, is coming unmoored from its companion world. Its name is becoming ecoculturally anachronistic. It serves, as such, as a sort of bridge between an old world in which phenology was regular and predictable and a new warmer world, in which the old patterns are becoming disrupted.

The discipline of Japanese haiku offers another interesting example of the same phenomenon. Justin McCurry describes how traditional Japanese Haiku belong "to an age of symmetry between culture and the seasons that is being irrevocably blurred by the climate crisis" (2023). Traditional Haiku follows a strict formal template. Each short poem must include a Kigo - a seasonal reference word. These Kigo words, in turn, are collected in the Saijiki - a sort of almanack of "thousands of seasonal words that are widely acknowledged as acceptable for inclusion in haiku" (Ibid). With climate change and the scrambling of the seasons due to global warming, haiku expert David McMurray worries that "the Saijiki will essentially become a historical document" (quoted in McCurry, 2023). The seasonal keywords are shifting out of alignment with the seasons themselves. Certain Kigo have all but lost their ability to spark their associated affect. The seasonal word 'Koharubiyori', for instance, refers to an unexpected day of springlike weather in autumn (Ibid). Similarly, 'Zansho' refers to an early autumn day of summer heat (Ibid). Historically, these two phenomena were rare and noteworthy enough to become tropes. Today, they represent the norm. Their inherent sense of juxtaposition has been elided. The discipline of Haiku is coming unmoored from its companion world - the form was popularised amidst "the seasonal certainties of the late 1600s" (Ibid). Today, the Saijiki and the Haiku that employ it are being rendered as ecocultural anachronisms. These seasonal words become bisociated - they serve as connections between a regular and predictable past and a scrambled and unpredictable present.

In all of these cases, increased temperatures degrade or destroy the companion worlds of various units of human culture. These parts of culture are, as a result, unmoored and cast adrift. In this condition, they serve to join together two realities - the old Holocene world to which they properly belong and the new Anthropocene world which has unmoored them and in which they appear as eerie, spectral traces of a vanishing world.

6.8 Loss of abundance

Temperature is not the only dimension around which Holocene-Anthropocene ecocultural anachronisms might emerge. This is because the Anthropocene is not simply or only warmer than the Holocene, there are other vectors of change also worthy of attention. The climate adjacent phenomenon of Anthropocene biodiversity loss provides another rich seam of bisociation and ecocultural anachronism. It might be said that there are memes or units of culture that assume or are backgrounded against levels of biodiversity abundance that are vanishing in the Anthropocene. These are memes characterized not by being overbuilt but by a sort of assumed overabundance.

Crickets, the insects, provide a good example. Merriam-Webster points out that the term Crickets, because of their chirping “has become a kind of cultural shorthand that indicates much with a single word”[145]. The sound of crickets chirping stands for “a generalised sense of open emptiness” (Ibid). Originally, the sound of crickets chirping was used as a “cinematic shorthand” to denote quiet emptiness (Ibid). The dictionary entry explains that, more recently, “just the word [crickets] itself is enough to convey the meaning “silence””. As such, the entry states: “In its most recent extended use, 'crickets' has become a word for "silence"” (Ibid). They quote an example from the New York Times: “On a USA Hockey goaltending conference call

[145] Merriam-Webster (n.d.) ‘Words We're Watching: 'Crickets'’, *Merriam-Webster*, Available at: https://www.merriam-webster.com/wordplay/words-were-watching-crickets-silence#:~:text=The%20chirping%20of%20crickets%20is,city%20and%20far%20from%20people (Accessed: 18 March 2025).

last year, the 25 or so participants were asked if they had experience with sled goalies. 'It was pretty much crickets except for me,' [Jason] Wolfe said in a telephone interview" (quoted in Ibid). The sound of crickets, then, is constructed as an immutable background hum: the sound that is left when everything else stops. The trope is an example of a natural phenomenon taken for granted to the extent that it doesn't so much fade into the background as become a stock sound effect for the background itself.

Biodiversity loss, however, is hollowing out this cinematic shorthand. Alienor Jeliazkov et al., for example, have found that acoustic monitoring of crickets in France over a six year period (2006-2012) demonstrated a significant decline in abundance (2016). This was measured by noting how much quieter the sounds of crickets had become in the study areas over that period. This decline was correlated with climatic patterns and changes in land use (ibid). Climate change and habitat destruction, in other words, is, quite literally, making crickets quieter. Michael Blencowe, People and Wildlife Officer at Sussex Wildlife Trust, makes this point. He writes that "Our countryside is becoming quieter as crickets, bees and birds vanish" (2015). Joseph Winters, in an article titled "How climate change is muting nature's symphony" makes a similar point. He notes that several species of cricket have been listed as critically endangered (2022). The trope of crickets as stock sound effect for silence was established, it transpires, on a taken for granted Holocene abundance of insect life. As that abundance disappears, the stock sound effect we use to denote silence is itself being silenced. What seemed like an invariable background hum was never, in fact, invariable. The trope is becoming decoupled from its ground, its companion world. As such it becomes bisociated. It takes on a new ghostly and uncanny meaning in the Anthropocene. It becomes a kind of password, a portal for jumping from the taken-for-granted backgrounded nature of the Holocene to the diminished nature of today, of the Anthropocene.

I have already mentioned this example, though it bears being raised briefly here again. Franklin Ginn and Helen Whale offer a more localized example of a similar phenomenon. Whale and Ginn consider the term – the meme – 'Cockney Sparrow'. This is a colloquial term of endearment for Cockney people. It emerges from the fact that, historically, Sparrows were ubiquitous in central London – one interviewee

recalls they were “just always there, always chirruping away in the background” (2017, p.108). Since the late 1970s, however, as part of a wider biodiversity collapse, sparrow populations in urban Britain have fallen to “near-extinction” levels (ibid, p.94). As a consequence, Whale and Ginn point out, the term ‘Cockney Sparrow’ “will be released from any visible ecological mooring, left to free-float mysteriously” (Ibid, p.111). The term, then, will soon become a case of ecocultural anachronism. Interestingly, Whale and Ginn conceive of this in explicitly spectral terms. They write that the “sparrow will linger as a ghostly linguistic presence” in the area even after the real sparrows are gone (Ibid). Once again, the term is fundamentally bisociated - it has a standard Holocene meaning and an eerie, Anthropocene meaning.

Jared Del Rosso makes similar arguments with relation to the Whip-Poor-Will in the United States. He describes how “The iconic call of the Eastern Whip-poor-Will has long been part of the fabric of American life” (2024). He recounts how the bird’s distinctive call is “part of the nation’s emotional landscape (Ibid)”. Rituals emerge around the bird’s annual springtime return: hearing the first call of the whip-poor-will is a reminder to plant sensitive crops. Del Rosso recounts how “One could make a wish on his song, roll on the ground three times for a year without back pain” (Ibid). The call of the whip-poor-will is found (famously) in Hank Williams lyrics, in the writing of Stephen King (Ibid). Between 1970 and 2014, however, whip-poor-will populations have declined almost 70% (Ibid). The result, Del Rosso says, is what Michael Pyle describes as an “extinction of experience” (Ibid). The loss of a species like this, Del Rosso goes on, means that we may “no longer understand long-standing rituals and references” (Ibid). Del Rosso asks: “how many have wailed along with Williams without having shared a summer night with a whip-poor-will?” (Ibid). These references linger on even after their real-world referent is no more. Yet again, they are bisociated: they serve to connect two realities. In one, they refer to an everyday, quotidian aspect of the fabric of American life, in another, they are a ghostly reminder of a disappearing world.

There are several other types of logic - to use Koestler’s phrase - according to which we might define the M1 and M2 that are Holocene and Anthropocene. One more worth mentioning here is the precise opposite to that that defines the relationship

between Pleistocene and Holocene. Rather than being overbuilt, there are examples where Holocene cultural models are underbuilt for the emerging extremes of the Anthropocene. One area in which this can clearly be seen is with regard to climate related scales and measures.

6.9 Making Blends

In the previous chapter, I made a distinction between what I termed 'found' examples of ecocultural anachronism and created or produced examples. That distinction is useful again here. The examples I have presented in this chapter so far are 'found' examples. That is to say, that they exist in the world and simply require being framed and presented in the right way so as to be seen as 'passwords'. It is possible also, however, to think about produced blends. In this section, I present some instances of such produced blends.

Consider, in this context, a case presented by Deborah Dixon. In an article on visualisations of extreme heat in the era of climate change, Dixon describes how meteorological and climatological authorities around the world have been forced by unprecedented heatwaves and high temperatures to introduce new colours into their visualisations of temperature (2023). In particular, Dixon focuses on the use of purple to denote extreme heat. She recounts how, for instance, meteorological authorities in Australia were required to introduce purple into their heat maps of the country when temperatures during a heatwave threatened to exceed 50 degrees Celsius (Ibid). The authorities had, in effect, run out of ever-darkening shades of red and required a new colour to extend the scale. Temperatures were, in a quite literal sense, off the charts. The old scale, in other words, had become ecoculturally anachronistic.

Dixon points out that what was broken in this Australian case was not simply weather records but, also, what emerges as a Western Holocene trope. She explains that the "blue-cool/red-warm association emerged from Western painting - and in particular in 18th and early 19th [century] English colour theory" (Ibid, p.108). This trope made its

way from the art of painting to the science of meteorology where it grew to become the hyper-normalised, taken-for-granted mechanism for visually representing temperature with colour. Climate change, however, breaches this trope as it causes temperatures so far outside the norm that normal depictions won't suffice. As a consequence, purple is introduced to denote, in Dixon's terms, “Heat beyond the ordinary” (Ibid, p.109).

Dixon focuses in on the sense in which the old colour scale turned out to be contingent and is now anachronistic. She sees the new purple, in turn, as fundamentally bisociated - on the one hand a simple bureaucratic decision taken in order to represent new climatic realities more clearly. But, at the same time, a sort of warning of a fundamental breach of normality, a move away from Holocene predictability. Purple becomes, for Dixon, a sort of password. She performs a sort of critical reading of the role of purple in weather visualisations. She argues that, in them, purple signals “not just a relative temperature but also a fundamental ‘breach’ of climate norms” (Ibid, p.106). Purple works to denote a certain temperature range but also to denote “the breakdown of the ordinary, the disruption of the expected” (Ibid, p.103). Because of the extent to which the Western model of colour temperature has been normalised and backgrounded, the purple is incongruous and out of sync. Dixon points out that it also undercuts the logic of the blue-red scale in that, in reintroducing an element of blue, it “repeats a hue already in use to denote degrees of coldness” (Ibid, p.104). For Dixon, then, the purple takes on more meaning than its simple role in communicating temperature. It becomes part of what she terms a “warning lexicon” (Ibid, p.103). It is representative of a wider scrambling or normality, a wider breakdown that is, Dixon says, bespoken by “the falling apart of words and images - of temperature scales - that can no longer situate and orientate us” (Ibid, p.111). Purple, in this context, becomes a “prompt for thoughtful, critical engagement with the science of global climate change” (Ibid, p.104). Dixon here is essentially anchoring a floating signifier. Purple emerges in heat charts but has no concomitant cultural meaning. Spotting this opportunity, Dixon provides a definition that does communicative work.

Dixon points out how the use of purple represents a sort of portal that connects - to borrow terminology from Koestler - the “tragic” and “trivial” planes of human life

(Mays, 1973), the ridiculous and the sublime. She imagines that the process of introducing the new purple onto the Australian weather maps, the aesthetic and procedural decisions involved in that process, was, for someone, a simple bureaucratic necessity. It was, she imagines a “banal act” involving “going into a software programme and selecting from an automated palette” (Dixon, 2023, p.104). It was, she writes, banal in the sense of “being undertaken by Bureau staff members as part of their everyday job” (Ibid, p.103). At the same time, however, the same act can be read as a “visceral event”: as “unprecedented, disordering, disturbing”, as a fundamental breach. Dixon sees in the microcosm of purple, the macrocosmic breaches of Holocene and Anthropocene, of Earth and Eaarth (Ibid). Elizabeth Rush wrote that she found herself ‘reading an unfathomably large planetary phenomenon … Inscribed into the skeletal tupelos’. In the same way, Dixon wants to use purple to toggle between the small and the very large, the trivial and the tragic. She writes, “It might be said that I am reading too much into purple; adding an interpretive layer onto an action driven by someone in the Australian Bureau of Meteorology tasked with adding two more colour categories” (Dixon, 2023, p.112). But she defends her focus on the seemingly trivial by demonstrating how it is connected to the global, the profound, the tragic: “Yet, we can see in such a banal act how a localised ‘breach’ of what is imaginable for weather becomes the precursor for a globalised, viral breach of what is imaginable for climate” (Ibid).

6.10 Category 5 Mess

Dixon’s use of purple as a password serves as a kind of blueprint. A similar pattern exists in relation to hurricanes. The example of category 6 hurricanes can be seen to work along similar lines. In an influential paper that garnered significant media attention, Michael Wehner and James Kossin suggest that a sixth category ought to be added to the current five that make up the Saffir-Simpson hurricane wind scale (2024). They explain that the current five-category scale was introduced by the United States’ National Hurricane Centre in the 1970s and has since become the most common metric used to warn the public about the strength of approaching storms (Ibid). The authors explain, however, that global warming has produced

conditions in which hurricanes can become significantly more powerful than was previously likely. As such, they propose the introduction of a sixth category into the scale, which currently ends in an open-ended Category 5. The authors point out that, already, a number of major storms - notably Typhoon Haiyan - have been far enough beyond the threshold for Category 5 that they warranted being categorised on a new additional level (Ibid). The authors further point out that, a decade before their paper, scientists were suggesting that Haiyan had breached the existing scale and warranted the addition of a sixth category (Ibid).

These calls for a new sixth category of hurricane appear to have captured the imagination of the media, with hundreds of pieces appearing on the proposal. Two headlines capture the general thrust of these pieces: the *Los Angeles Times* ran a piece with the headline, “You’re gonna need a bigger number: Scientists consider a Category 6 for mega-hurricane era”[146]. *USA Today*, meanwhile, headlined their article, “'Category 5' was considered the worst hurricane. There's something scarier, study says”[147]. The emphasis in the coverage was on the fundamental notion that the proposal of the sixth category confirms the idea that we have crossed an important threshold. The commonplace and comfortable categories of the old world no longer hold, and new alien ones are required. Category 6, the argument goes, “would expand our vocabulary” to describe new kinds and levels of risk (99% Invisible, 2024). The parallels with the addition of purple to temperature scales is clear. In this case, ‘Category 6’ would take on many of the meanings Dixon ascribes to her new purple: weather beyond the ordinary, a breach of normative expectations and understandings.

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[146] Purtill, C. (2024) ‘You’re gonna need a bigger number: Scientists consider a Category 6 for mega-hurricane era’, *Los Angeles Times*, 26 April. Available at: https://www.latimes.com/environment/story/2024-04-26/scientists-consider-a-category-6-for-an-era-of-mega-hurricanes#:~:text=You're%20gonna%20need%20a,Atlantic%20Ocean%20in%20August%202019 (Accessed: 20 March 2025).

[147] Pulver, D.V. (2024) ‘"Category 5" was considered the worst hurricane. There's something scarier, study says’, *USA TODAY*, 5 February. Available at: https://eu.usatoday.com/story/news/nation/2024/02/05/category-6-hurricane-study-cites-climate-change/72426410007/ (Accessed: 20 March 2025).

Unlike Dixon's example of purple, however, the five-category scale used to describe hurricanes did not pre-exist the Saffir-Simpson scale as a cultural trope. Instead, the scale was first developed as a scientific and communicative tool which has since then "transcended hurricanes" (Ibid) and entered into the popular vernacular as a metaphorical trope. A large part of the reason that the addition of a sixth category to the scale captured the media's attention to the degree that it did has to do, I claim, with the sense in which the scale has become a vernacular trope or metaphor. As elements of the popular vernacular, the scale and its categories have become metaphorical tropes used to describe all kinds of disaster.

In particular, 'Category 5', because it serves as the superlative (for the time being), emerges as a cultural trope. *Category 5* is the name, for instance, of a 2014 TV movie starring Burt Reynolds whose logline is "Members of a family try to survive the largest hurricane in recorded history"[148]. 'Category 5' enters into the popular vernacular in a more diffuse way too, however. Some examples will help to establish this. Here, for instance, are some things described in media texts as a 'category 5 mess':

Table 3: category 5 mess

Entity described	Outlet	Quote (emphases added)
Data breach and subsequent fallout	Hartford Courant	"Breach of Equifax Data a **Category 5 Mess**" (headline)
A scandal in the Baltimore Police Department	Baltimore Sun	This is two years after the Gun Trace Task Force catastrophe, which was a **category 5 mess**.
The prospect of 5 million Americans suddenly	The Washington Post	John Roberts will never get credit for this, but the

[148] Rotten Tomatoes (n.d.) Category 5. Available at: https://www.rottentomatoes.com/m/category_5 (Accessed: 21 March 2025).

losing health insurance coverage		Chief Justice helped Republicans avoid a **Category 5 mess** with his King vs. Burwell decision
The PR fallout for Disney when Mel Gibson was arrested for DUI	Nexttv.com	when Mel Gibson took a break from his busy duties as the "owner" of Malibu to spew anti-Semitic and sexist bile after being stopped for drunk driving, it looked like Disney had a **category-five mess** on its hands[149]
New York City during the combined visits of the UN President, the United Nations and the Catholic Pope	The Widdershins (blog)	I hope you are out of Noo Yawkah this week. It's going to be a **Cat 5 mess**. Get out while you still can.

Here, then, are some instances of things characterised as with the considerable more common term "category 5 shitstorm":

Table 4: category 5 shitstorm

Entity described	Outlet	Quote (emphasis added)
The US Defence Department in 2006	Atlantic Magazine	Gates reportedly thought to himself, "What the hell

[149] Palmer, C. (2006) 'Disney makes Gibson-Ade', *NextTV*, 16 October. Available at: https://www.nexttv.com/blog/disney-makes-gibson-ade-120985 (Accessed: 21 March 2025).

		am I doing here? I have walked right into the middle of a **category-five shitstorm**[150].
Donald Trump's 2016 campaign for President	IMDB	with Donald Trump talking about women, it's, uh... it has been upgraded to a **category five shitstorm**[151].
The firing of journalist Lauren Wolfe	Vanity Fair	Over the weekend, The *New York Times* became engulfed in a **Category 5 shitstorm** for terminating the employment of a freelance editor, Lauren Wolfe[152]
The making of Netflix's *Murdaugh Murders*	Vanity Fair	Furst and Nason did reach out to Alex's representatives to see if he'd like to participate in the docuseries. But by that point, "it was a **category five shit storm** for the Murdaugh family,"

[150] Bump, P. (2014) 'Robert Gates thinks Joe Biden hasn't stopped being wrong for 40 years', *The Atlantic*, 7 January. Available at: https://www.theatlantic.com/politics/archive/2014/01/robert-gates-thinks-joe-biden-hasnt-stopped-being-wrong-40-years/356785/ (Accessed: 21 March 2025).
[151] IMDb (n.d.) 'Episode #14.34 – *Real Time with Bill Maher* quotes'. Available at: https://www.imdb.com/title/tt6092480/quotes/?item=qt3407417 (Accessed: 21 March 2025).
[152] Pompeo, J. (2021) '"We can't have that": Inside The New York Times' firing of Lauren Wolfe', *Vanity Fair*, 25 January. Available at: https://www.vanityfair.com/news/2021/01/inside-the-new-york-times-firing-of-lauren-wolfe?srsltid=AfmBOooH88s0INSz1ejNnEwb-Vz_n9xU_mhy2LjDSqB00PEVgsE7HDrB (Accessed: 21 March 2025).

		says Furst[153].
The fallout from Robert Kennedy Jr.'s alleged affair	Stats	Last week, Olivia Nuzzi, the star journalist whose digital affair with Robert F. Kennedy Jr. ignited an unrelenting **Category Five shitstorm**, received a message[154].

'Category 5' in these cases functions, essentially, as a superlative: the biggest mess, the biggest 'shitstorm' imaginable.

In the context of Category 6 storms, however, these examples take on an uncanny, eerie new kind of meaning. Though Category 6 has not (yet) been adopted officially in the science of meteorology, the notion of Category 6 storms has certainly emerged as a concept in popular culture. Category 6 storms are not a future threat but a present danger. In the words of Micheal Mann "Cat 6 hurricanes have arrived"[155]. 2024's Hurricane Milton confirmed that Category 6 storms have arrived in the popular imagination and discourse even if not yet in scientific classification. *USA Today* issued a fact checking article to counter rumours that, it said, "circulated widely" on social media that Milton was the first official category 6 storm[156].

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[153] Miller, J. (2023) 'Netflix's Murdaugh murders team say they've uncovered new crimes', *Vanity Fair*, 22 February. Available at: https://www.vanityfair.com/hollywood/2023/02/murdaugh-murders-netflix-interview#:~:text=The%20filmmaker%20made%20Dune%20knowing,Murdaugh%20family%2C%E2%80%9D%20says%20Furst (Accessed: 21 March 2025).
[154] Darcy, O. (2024) 'Gone in a New York minute', *Status*, 21 October. Available at: https://www.status.news/p/olivia-nuzzi-exits-new-york-magazine (Accessed: 21 March 2025).
[155] Mann, M. E. (2024) 'Cat 6 hurricanes have arrived', *Proceedings of the National Academy of Sciences*, 7 February. Available at: https://www.pnas.org/doi/10.1073/pnas.2322597121 (Accessed: 21 March 2025).
[156] McCreary, J. (2024) 'Hurricane Milton didn't reach "Category 6." There's no such thing | Fact check', *USA TODAY*, 9 October. Available at: https://eu.usatoday.com/story/news/factcheck/2024/10/09/milton-category-6-hurricane-fact-check/75585892007/ (Accessed: 21 March 2025).

In large part, scientists are resistant to the official addition of a sixth category because they fear that it could devalue the existing top-of-the-scale categories. Given that it is already a challenge for authorities to convince people to evacuate or shelter during warnings of Category 4 and 5 storms, some scientists worry that the addition of a sixth category could make Category 4 and 5 storms - which pose a major threat to human life - appear relatively mild[157]. Scientists worry, in other words, that the addition of a sixth category would effectively break the fifth. As Category 6 storms emerge in the culture and, perhaps, ultimately in scientific officialdom, this concern can be transposed from the scientific scale to the vernacular one. Can we think of Category 6 storms as 'breaking' vernacular Category 5 ones? As climate breakdown introduces new extremes and, as our cultural vocabulary shifts to keep up with those new extremes, what becomes of our old descriptors. In the emerging context of Category 6 storms, Category 5 hurricanes are effectively bisociated. In a Holocene context they represent the superlative, the most powerful kind of storm imaginable. In an Anthropocene context, however, they come to represent a sort of false ceiling - in the context of Category 6, Category 5 takes on a strange new meaning as the most powerful kind of storm imaginable prior to the scrambling effects of climate breakdown. We can envisage a sort of footnote from the future that might need to be added to - for example - the title of the film *Category 5.*

We can, in other words, use the concept of Category 6 storms to trouble and distort the vernacular metaphor of Category 5. As mentioned earlier, we can, of course, say many of the same things Dixon says of the new heatwave purple about the idea of Category 6 storms. I claim that rather than being rendered less meaningful, the vernacular phenomenon of Category 5 becomes much more profoundly and poignantly meaningful in the emerging context of Category 6. From the vantage point of Category 6, the cultural concept of Category 5 ceases to mean 'the worst kind of disaster imaginable' and, instead, comes to mean 'the worst kind of disaster imaginable in the old world'. It takes on a sort of prelapsarian naivete: this was as bad as we could imagine things getting before we crossed certain tipping points,

[157] Pulver, D.V. (2024) '"Category 5" was considered the worst hurricane. There's something scarier, study says', *USA TODAY*, 5 February. Available at: https://eu.usatoday.com/story/news/nation/2024/02/05/category-6-hurricane-study-cites-climate-change/72426410007/ (Accessed: 20 March 2025).

these were the things we worried about before. The ‘broken’ or superseded cultural Category 5 can be force-fit to serve as a descriptor of the fact that the both quantity and quality of problems we face on Eaarth are profoundly different to those we faced on Earth, that our superlatives for disaster are not flexible enough to include Anthropocene problems. As in Dixon’s example of purple, we can use what is fundamentally a scientific question - whether the hurricane scale needs to be extended - to re-interpret a linguistic, humanities phenomenon. And we see that the re-interpreted vernacular metaphor of Category 5 is not simply rendered anachronistic by the emergence of Category 6 but, instead, takes on an uncanny and poignant new meaning.

6.11 The Uncertain Four Seasons

An example of ecocultural anachronism is, effectively, an example of bisociation. Discovering an example is tantamount to discovering some element of culture that is caught between two worlds. In order to create a blend, the case of bisociation needs to be mobilised into a communicative package. I have already discussed the idea that ghost stories offer one rich way of thinking about this. In this section I want to present one method for turning bisociations or ecocultural anachronisms into conceptual blends. I refer to this method as reversioning.

As discussed in relation to summer in the previous chapter, the seasons are themselves literary tropes in the Western tradition. As previously discussed, perhaps more than any other aspect of nature, the cycle of the seasons is taken for granted as cultural background. It is worth quoting from Clark again here who writes about the perceived “normativity of the seasonal/natural as a reassuring background for human affairs” (2015, p. 41). He describes it as a universal human characteristic “to perceive familiar natural processes and their seasonal timing as a basic framework of ‘meaning’ for life” (Ibid). For artists, the seasons function as a “structuring device” (Somervell, 2019, p.45) or a “background norm” (Clark, 2015, p. 40). They are a “convention” which, she writes, “reflect somewhat accurately the annual patterns of European weather” (Somervell, 2019, p.45). In Nick Groom’s terms, the seasons

represent “a rough compromise between nature and culture” (Groom in Somervell, 2019, p.45). Only in the context of Holocene climatic predictability could the convention of the seasons emerge and stick. Furthermore, over time, that same predictability allows for the seasons to become “freighted with cultural, moral, and aesthetic value” (Somervell, 2019, p.45). Sommervell writes that “each individual season [is] elevated through abstraction to the status of eternal type” (Ibid). From the literal seasons emerge a set of corresponding literary seasons. It is in this context that Sommervell points out that the autumn referred to in Keats’ ode “To Autumn” “is both the specific autumn of 1819 and a timeless abstraction that outlasts this iteration of the season” (ibid). The poem is, in some sense, an ode to an abstracted personified Autumn that has become associated with a certain sensibility and affect.

Climate change reveals this perceived normativity as little more than a trick of the Holocene light. Warming means that, as Clark puts it: “What was once a norm, the ‘natural’, emerges as a biological contingency that is becoming deeply problematic” (Clark, 2015, p.40). Clark writes that the “homely sense of permanence” that the poem provides” is “now fragile” and “was in any case illusory” (Ibid, p.43). Climate change is producing what Justin McCurry has termed “seasonal dissonance” (2023). The American Environmental Protection Agency states “climate change is driving longer term changes in seasonality and fundamentally altering the ways in which humans and natural systems experience and interact with seasonal events” (EPA n.d.). As the literal seasons change, the literary seasons become increasingly unmoored.

Antonio Lucio Vivaldi’s four eighteenth century violin concerti, *The Four Seasons*, represent, perhaps, the seminal artistic expression of the four Western seasonal tropes. Through a series of smaller tropes and memes, Vivaldi gives expression to the four season-types. Marecki and Paprocki, in their essay on the conceptual representation of winter in music, phrase it this way: “the work of Vivaldi appears to demonstrate the existence of several conceptual micrometaphors that cluster around the central cross-domain mapping between winter and music” (2012). These micrometaphors are the tropes or memes that have built up around, in this case, the central meme of winter through convention and long association. So, for instance, Vivaldi’s Autumn concerto opens on a jubilant note as he musically evokes the joy of

a bountiful Autumn harvest. Vivaldi famously evokes trills of birdsong and the trickle of a brook in Spring. In Winter, meanwhile, he depicts what it is like to slip and fall on ice as well as the crackle of a fire in the hearth (Ibid). Vivaldi reaches for “the expressive aura of each season” (Ibid). The cycle of the seasons provides his work with its structure and through a series of conventional cultural models, he is able to evoke abstracted versions of each season in turn. Vivaldi’s four seasons are, then, the quintessential four Holocene seasons.

In recent years, a number of composers and projects have recomposed and rearranged updated versions of Vivaldi’s Four Seasons. These versions alter the original music in order to depict the changes in nature arising from climate breakdown. In a project titled “For Seasons”, for instance, the NDR Elbphilharmonie, used climate change data to algorithmically alter the notes in Vivaldi’s original concerti in order to reflect climate changes up to 2019 (Gameau, 2021). The result is a heavily distorted re-versioning of the original. The trailer for the project begins by stating: “in 1725 Vivaldi composed his masterpiece. Since then the world he depicted has changed drastically.” (The [uncertain] Four Seasons, 2021). The trailer goes on to claim that “climate change has almost eliminated the distinctions between the seasons” (Ibid). It updates a series of Vivaldi’s seasonal tropes for a changed climate: “Vivaldi’s murmuring streams are left either flooded or dried out. And many of his festively singing birds have been silenced by extinction” (Ibid), it says. The trailer describes the project as an attempt to make “climate change audible” (Ibid).

Another project, “The [Uncertain] Four Seasons”, picks up from where “For Seasons” left off by further altering Vivaldi’s concerti with algorithms that project climate changes up to the year 2050. In an essay on the project’s website, Damon Gameau sets out the basic mission of the project: “to take the themes and ideas from Vivaldi’s original score and recompose them as if he’d written them in the year 2050” (Gameau, 2021). He describes the result as “jarringly altered from the harmony of Vivaldi’s original” (Ibid). In another project, Spanish composer Hache Costa adapts Vivaldi’s *Four Seasons* “to the grim reality of global warming” (Reuters, 2023). Costa adds prominence to the summer concerto while shortening the other three in order to emphasise the rise in global temperatures (Ibid). A final similar project was undertaken by a team at the University of Gottingen. Professor of Composition Mark

Barden and his students recomposed Vivaldi's *Four Seasons* in collaboration with Professor of Bioclimatology Alexander Knohl and colleagues. The original was reworked according to climate change data (University of Göttingen, 2022). The resulting updated score was then performed by the Gottingen Baroque Orchestra.

At the heart of these reworkings of Vivaldi is the notion that the abstracted trope or type versions of the seasons as seminally articulated by Vivaldi have fallen out of sync with the new reality of nature's patterns. The homely, backgrounded reliability of the Holocene seasons has been replaced by a new destabilized Anthropocene cultural model of the seasons in which they are unfamiliar and discordant. For Vivaldi, the seasons were a taken-for-granted eternal backdrop. With climate change, however, the conceptual, abstracted memes of the seasons are becoming increasingly unmoored from their Holocene companion world. The seasons can no longer be taken for granted as background. In their places, new unfamiliar Anthropocene versions of the seasons emerge. In these reworkings of Vivaldi, composers take a representation of the Holocene / Earth seasons (the original music) and a representation of the Anthropocene / Eaarth seasons (climate change data) and mix the two in such a way that they both exist in tension with one another. Once again, then, climate breakdown is communicated using a blend. In this instance, the blend follows this pattern:

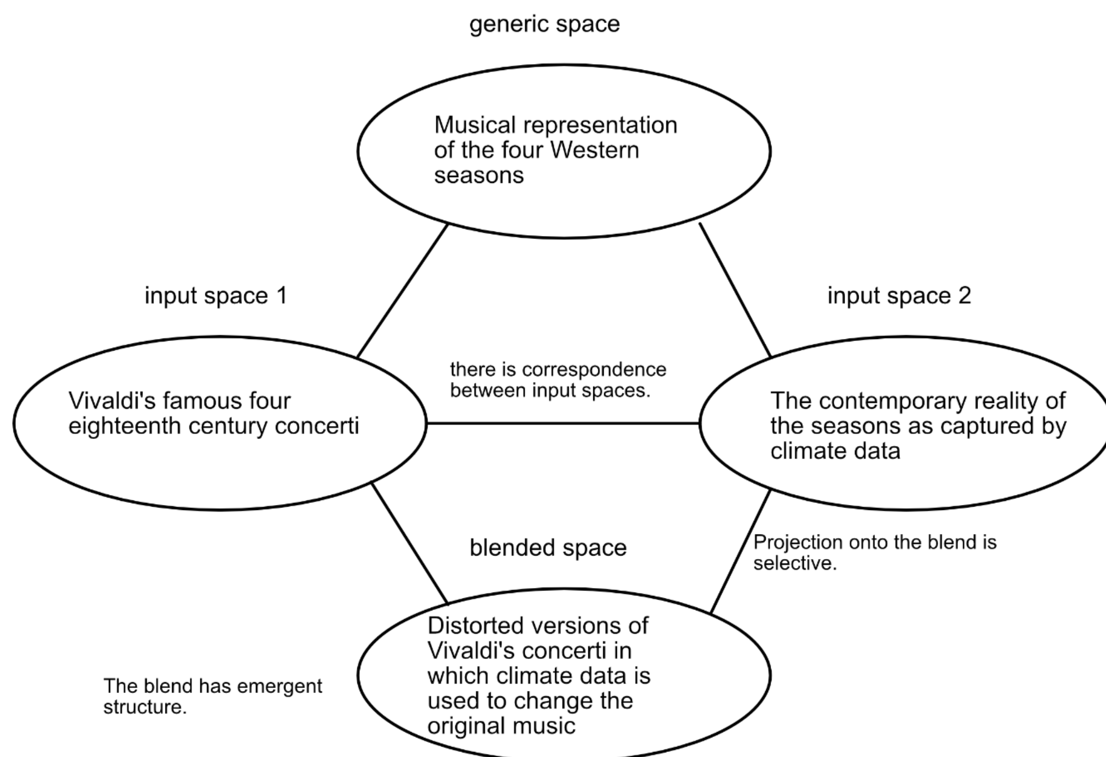

Figure 26: Four Seasons blend

In these examples, in one input space there is a Holocene compression of the seasons in the form of Vivaldi's concerti. Compressed into Vivaldi's concerti are numerous micro-metaphors and tropes that, over time, have come to signal certain ideas about the seasons. In the other input space, however, there is not an equivalent Anthropocene compression or cultural model. Instead of a cultural shorthand, there is Anthropocene climatological data. This data is used to apply the defamiliarization, the distortion, to Vivaldi's famous compositions. The end result, as in the examples in the previous chapter, is a blend that defamiliarizes the familiar so as to produce an uncanny representation of the Anthropocene. This blend functions as an effective illustration of the uncanniness of the Anthropocene. Compressed into the discordant music is the strangeness and sadness of the situation.

Vivaldi's concerti, then are reversioned as a blend. This reversioning need not be quite so explicit. Take, for instance, the following example from a *Guardian* climate

series by journalist Sylvia Colombo. Colombo writes a piece on the retreat of glaciers and decline in snowfall in the Chilean Andes. She uses as hook for her piece the release of J.A. Bayona's *Society of the Snow.* The film is a dramatization of the crash of Uruguayan Air Force Flight 571 in the Andes. The same crash forms the basis of Frank Marshall's 1993 film *Alive* and René Cardona's 1976 *Survive!* The story of Flight 571 grew into something of a sensation because, infamously, the survivors ultimately resorted to cannibalism of the victims in order to sustain themselves.

When the airplane crashed, it slid more than 2,000 feet along glacial ice and snow before coming to rest in what survivor Roberto Canessa describes as a "snowy universe". The *Guardian* quotes local mountain guide Ignacia Valenzuela Moraga as saying "If the tragedy had happened today, the climate crisis would have significantly altered the plot" (Colombo, 2024). For one, there is no glacier left upon which to slide: it has almost completely receded. Indeed, John Nance, an aviation safety expert, tells climate journalist Gina Jiménez for a follow up piece that "If they had landed in a snowless situation, more than likely it would have torn the airplane apart and nobody would have survived the initial crash because of landing on rocks" (Jiménez, 2024). A monument to the victims of the disaster, erected at the site of the crash, today sits in a red-brown almost Martian landscape rather than the snow synonymous with the story (Colombo, 2024). That snow, which proved both friend and foe to the Flight 571 survivors, is gone. The glacier along which the fuselage slid has retreated far up the mountainside. This change accords with climatological trends documented in the area. Colombo refers to a study in *Nature* that documented a 12% per decade reduction in snow cover in the Andes between 1986 and 2018 (2024). Colombo and Jimenéz effectively communicate this climatological data by using it to produce a Holocene-Anthropocene blend. In the blend, they imagine the events of 1972 - of the crash - occurring in the Andes of 2023, when the film was made. This, again, is a form of reversioning. By producing this blend, they demonstrate that the infamous narrative has come unmoored from its companion world, its setting is no more. The story, in other words, becomes a case of ecocultural anachronism. These two examples demonstrate how an essential bisociation or case of ecocultural anachronism is mobilised through the mechanism of reversioning.

6.12 Conclusion

In this chapter, I have provided a blueprint or guide with which to find the kinds of decouplings, unmoorings, and bisociations that underlie ecological anachronisms. I have suggested that they are to be found pooled around the principal vectors of Holocene-Anthropocene change. As the world warms or loses biodiversity, or faces other environmental impacts , units of culture that took for granted those changing aspects of the Holocene are undermined. As such, they become anachronistic and take on uncanny, eerie or even spectral new aspects in the Anthropocene. Seeing and showing these aspects of culture bisociated across Holocene and Anthropocene is the fundamental mechanism of Holocene-Anthropocene blends. Each instance of bisociation is a sort of microcosm, or compression, of climate breakdown. Each one has the potential to be used and shared as password, as portal through which to see the planetary phenomenon of climate change. Putting these examples to use, however, requires mobilising them in a communicative package. I have, in previous chapters, considered how ghost stories are a promising way of achieving this. In this chapter, I presented the idea of reversioning as a second method.

6.13 Coda

As previously mentioned, throughout this project I have engaged in elements of practice-based research aimed at understanding more fully how to mobilise the insights generated through this research to real-world communicative ends. In my practice based research, I follow Linda Candy who describes practice in an academic context as the process of turning concepts into artefacts. In this section, I present a piece of communicative practice in which I transform a concept developed by Deborah Dixon into a communicative artefact.

As discussed, Deborah Dixon considers the introduction of purple to weather and climate graphics. The purple has been introduced, she explains, in order to illustrate extreme temperatures beyond historical norms. As such, Dixon reads the purple as a "profound breach" of Holocene norms (2023, p.106). Purple is, for Dixon, bisociated. She considers how the addition of purple is, at once, "a banal act" made by an office

administrator in a piece of meteorological software (Ibid, p.104). At the same time, the same act is a “visceral event” signalling a breach in the very parameters of what is normal (Ibid). Purple becomes, then, a kind of password for Dixon, a portal. She considers is as a possible intuitive sign or signal of climate breakdown. Dixon sees that purple achieves a high level of compression with regard to communicating climate breakdown. On the one hand, it communicates, in a quite literal way, the extreme heat of contemporary and near-future heatwaves. At the same time, it communicates a breach in the normative patterns of conceptualization and representation.

I used Dixon’s insights around purple as the basis for an entry to the Environmental Design Studio’s Climate Creatives Challenge on communicating heat waves. The Climate Creatives Challenge consists of a series of contests in which climate communicators working in various media submit pieces of communication around a common theme. In 2024, I entered the competition under the heat waves theme with a campaign proposal inspired by Dixon’s conception of purple as breach. My goal was to find a compelling way of communicating the idea that there is now a need to use purple to represent heat beyond the ordinary.

In order to translate Dixon’s central idea of purple heat as breach of the ordinary into a communications campaign, I transposed it from the world of temperature into the world of spice. I developed the idea of producing a very ‘hot’ (spicy) purple hot sauce as an encapsulation of this concept. I discovered that there are varieties of purple chilli pepper with which it is possible to make a vivid purple hot sauce (purple cabbage can also be added to the recipe in order to increase the saturation of the colour). Based on this discovery of purple chillis, I developed a campaign proposal wherein bottles of very hot purple ‘heat wave’ hot sauce would be made and sent to key influencers. The bottle’s label would explain that though we don’t always associate purple with extreme heat, it may be time for us to begin thinking that way. The label would then go on to detail the sense in which purple is coming, in the era of climate breakdown, to stand for ‘weird heat’. At the same time, by breaching normative expectations for the appearance of hot sauce (which is almost always red), the sauce itself comes to stand for weird purple heat. As such, the sauce

encapsulates Dixon’s concept. In the terms of Linda Candy’s description of practice based research, the sauce renders Dixon’s concept as an artefact.

As with the previous piece of practice based research presented, producing this campaign proposal provided me with real insight into the dynamic under study and how it functions in real-world communicative contexts. As with the glacial example, the tasks involved in producing this piece of research were, first, to identify a password or portal – in this case Dixon’s purple fills this role. The second task was to identify the packaging in which this password might be compellingly delivered. Dixon’s article is, in effect, one way of communicating purple’s potential. My solution, in the interest of producing something that might form the basis of a communications campaign, was to transpose the idea of ‘purple as weird heat’ from temperature into spice and, in so doing, produce another blend. I am, here, leveraging conceptual blending’s facility for compression in order to encapsulate the concept in a concrete artefact.

This piece of practice received a commendation from a panel of expert judges and was chosen for inclusion in the Environmental Design Studio’s booklet arising from the heat wave project. The positive reception of this piece of practice helped conform to me that Dixon’s instinct in her article – and my own through this project – that these password or portal entities, like heat wave purple, are compelling ways of communicating the uncanny effects of climate breakdown. I include the campaign proposal I submitted here:

communicating heatwaves

Over the last decade, beginning with Australia in 2013, unprecedented heatwaves featuring temperatures that are literally off the old scales have forced authorities to add a new colour to their heat maps. That colour is purple:

heatwave purple

This proposed campaign uses heatwave purple as its hook. The campaign's key message is that:

extreme heat has a new colour

Heatwave purple helps to communicate the fact that, where heat waves are concerned, we are already so far beyond the normal historical range that our very language - e.g. 'red hot' - is struggling to keep up.

campaign execution:

Though less common than their red and green counterparts, chilli peppers also come in purple varieties (e.g. Purple Cayenne, or Purple Jalapeno). Hot sauce made with these purple varieties can retain that unusual purple colour.

For this campaign, we would work with a chef to produce a very limited edition batch of very spicy purple Heatwave hot sauce.

We would then send a bottle to a carefully selected list of science communicators: creators like Hank Green, Neil deGrasse Tyson and Cleo Abram. We would also seek to have the sauce featured on an episode of the hot sauce based YouTube talk show *Hot Ones*.

These well-known personalities would be asked to film themselves trying the sauce. Then, battling through the Heatwave of spice, they would deliver our key messages:

Climate change related heatwaves are literally off the scale. So much so that extreme heat has a new colour: heatwave purple.

By 2040 around half the world's population will experience major heatwaves. Heatwave related illness and death already affects tens of thousands, particularly the most vulnerable. We must work both to adapt to new realities and to tackle the underlying causes of extreme heatwaves.

Chapter 7: Emerging Anthropocene Metaphors

7.1 Introduction

The preceding chapters are concerned with the becoming unfamiliar of the familiar, the making strange or uncanny of the conventional. At the beginning of this project I noted that, at its core, it is a project about what I have termed climate breakdown in our second nature and about the idea of culture - nature reference points. In this chapter, I turn to look at what might be thought of as the other side of the same coin. This chapter presents a research finding made in the process of researching the idea of ecocultural anachronism. In this chapter, I am less focussed on the loss of old reference points than with the emergence of new ones. I am interested here in the ways in which the uncanny and relatively unfamiliar climate of the Anthropocene is generating its own set of cultural models and compressions. This chapter, in other words, is focussed not so much on the becoming uncanny of the familiar but, instead, with the becoming familiar of the uncanny. In this chapter, I return to critical metaphor analysis in order to understand the ways in which aspects of climate breakdown are discursively constructed by these emerging metaphors. At the same time, I mobilise conceptual blending theory as a methodology as a way of interpreting and reversing the metaphors I discover.

The research in this chapter emerged from an observation made in the course of researching the glacial metaphor. In researching the journalistic construction of glaciers, I encountered an article in the *Guardian* which described Italian schools as "vanishing like glaciers"[158]. This article helped me arrive at a double insight. In the first instance, it clarified for me the idea that, today, we carry around with us two cultural models of glaciers. Secondly, however, it suggested that the novel cultural model of glaciers, the Anthropocene model, might itself become a reference point for metaphor and other units of culture. Having chanced upon this initial example, I then searched for other instances of phenomena being described as 'vanishing' or

[158] Giuffrida, A. (2023) '"Vanishing like glaciers": plunging birthrate threatens Italian schools', The *Guardian*, 1 May. Available at: https://www.theguardian.com/ (Accessed: 21 March 2025).

‘disappearing’ ‘like glaciers’. What I discovered was a new, emergent metaphor with a relatively stable meaning. This then led me to the thought that other aspects of the Anthropocene, of climate breakdown, might also have given rise to metaphors. I began searching these out. Metaphor, as mentioned earlier has, for as long as it has existed, been grounded in nature. What I present in this chapter is the newest part of that long-standing story. These are metaphors grounded in a radically altered nature.

In this chapter I present a number of examples of emerging Anthropocene metaphors. Fundamentally, and on the broadest level, the focus of this chapter is the same as that of the ones preceding it. This chapter is, again, about this core notion of climate breakdown in our second nature. In this chapter, though, I am interested not so much in those aspects of our second nature that climate breakdown disrupts, but in the ones it helps bring into being.

The sense in which I think about climate breakdown in our second nature can be gleaned from the analogy or example of microplastics. Natural scientists from a range of disciplines look for evidence of humans’ impact on the environment in all sorts of settings and contexts. They might, for instance, track mean air temperatures in a given location and look for trends. They might measure the average sea level in a certain place and look for signs of rise. In this chapter, I am looking for similar evidence. I am not, however, looking in what might broadly be termed nature but, instead, I am looking in second nature.

The climate-adjacent phenomenon of microplastics offers a good analogy. The clear evidence emerging in recent years points to the fact that microplastics get everywhere - they have been found (quite literally) in Earth’s deepest ocean trough and at Earth’s highest mountain peak (Carrington, 2020). They are in human brains, in the food we eat, even in the air we breathe (Carrington, 2025). Can we, though, find traces of microplastics in our second nature? I argue that we can.

Consider, for instance, this line from a 2019 article in *Fast Company* magazine: “Brands are unavoidable in 2019. They are the microplastics of the media, pervasive and omnipresent, so just drink the tap water already and try not to ask too many

questions”[159]. Or this idea presented in a blog about Catholicism: “Such is the insidious nature of secularism … Think of it as the microplastics of the mind: invisible and yet slowly and inexorably wreaking havoc[160]”. Microplastics form the basis of simile now too. One blogger, writing about austerity, bemoans that “neoliberalism is everywhere like microplastics”[161]. On Reddit, meanwhile, a user discussing dog training myths writes that “Dominance theory stuff is so trash and it’s everywhere like microplastics”[162]. Here is just a small sample of some of the things said to be like microplastics: AI generated material, Taylor Swift, cultural notions of blackness, Marvel tropes, website cookies and online pornography.

These examples are drawn in some cases from journalistic sources but, in most cases, from less formal, more vernacular sources like comment sections and blogs. I draw attention to them because they suggest something novel . There is now, at least in Euro-American culture, quite a stable cultural model of microplastics. This cultural model is, in fact, stable enough to form the basis of an emerging metaphor. It is a referent for a meme. This metaphor, across the various examples, has a relatively stable meaning. To be ‘like microplastics’ or to be ‘the microplastics of’ this or that is to be insidious, unavoidably ubiquitous, corrosive and artificial. Microplastics are ubiquitous in our physical environment. The key point here, though, is that they have become ubiquitous enough in our cultural environments too to become almost invisibly embedded in the fabric of our language. This novel metaphor is, I claim, evidence of microplastics in our second nature. Just as physical microplastics have penetrated into the flesh of our brains, now microplastics as idea, as cultural model, have penetrated into our minds. Evidence of them is to be found in

[159] Wilson, M. (2019) ‘Oh no, Bird is selling a kid’s version of its ubiquitous scooters’, *Fast Company*, 21 November. Available at: https://www.fastcompany.com/90433064/oh-no-bird-is-selling-a-kids-version-of-its-ubiquitous-scooters (Accessed: 24 March 2025).
[160] Coronel, J. (2024) ‘Be countercultural, and while you’re at it, use less plastic’, *The Soulful Catholic Blog*, 24 October. Available at: https://thesoulfulcatholic.com/be-countercultural-and-while-youre-at-it-use-less-plastic/ (Accessed: 24 March 2025).
[161] Smith, J.M., 2024. Austerity, like old age crept up on us, and it is not going away without a revolution. Harry's Last Stand Newsletter. [online] Available at: https://jmsmith.substack.com/p/austerity-like-old-age-crept-up-on?utm_source=profile&utm_medium=reader2
[162] mcplaid (2022) ‘Most ridiculous dog training myths...GO!’, *Reddit*, 5 May. Available at: https://www.reddit.com/r/Dogtraining/comments/uw59lo/most_ridiculous_dog_training_mythsgo/ (Accessed: 24 March 2025).

the fabric of our physical environments and, now, as I demonstrate, evidence of them is to be found in our cultural fabric.

Microplastics are climate-adjacent – they are, of course, byproducts of the petroleum industry - but they are not the same as climate change. In this chapter, as in the preceding chapters, I am seeking evidence of climate breakdown in our second nature. In this chapter, though, my focus is not on the breakdown of Holocene cultural models but, instead, on the emergence of Anthropocene ones. Metaphor is a kind of machine for connecting the familiar and the unfamiliar such that the unfamiliar can be better understood in terms of the familiar. The previous chapter is about the ways in which climate breakdown makes the familiar strange. Conventional, stock cultural models are shown to be out of phase in the Anthropocene and new emergent cultural models begin to take their place. As such, the conventional metaphors are defamiliarized and renewed. Conceptual blending is the mechanism employed to show these shifts. This chapter is, again, concerned with how metaphor can help us to understand this inflection point in world history - as we stand on the threshold between familiar and unfamiliar.

7.2 Metaphors not *for* but *from* climate breakdown

Metaphor occupies an important place in the field of climate communication. A headline on a piece by journalist Matthew Lazin-Ryder captures the situation well. He refers to “The ongoing search for the perfect climate change metaphor” (2021). In a recent chapter on metaphor in climate communication, Koteyko and Atanasova reiterate the fundamental notion that metaphors provide framing devices for complex issues (2016). Metaphor, considered in this way, is what Donald Schon famously refers to as “generative metaphor” (1993). Generative metaphor is metaphor conceived of as “perspective or frame, a way of looking at things” (Schön, 1993). Generative metaphor, for Schon, is about “seeing-as” - it allows us to see certain phenomena or problems as or in terms of something else. Schon argues that this seeing-as is at the very core of solving big societal problems (Ibid). He writes, “I have

become persuaded that the essential difficulties in social policy has more to do with problem setting than with problem solving" (Ibid).

Ultimately, Schon sees metaphors as mini-narratives, as stories. And, he writes, "Problem settings are mediated … by the 'stories' people tell about troublesome situations" (Ibid). Each metaphor, each story, selects "for attention a few salient features and relations from what would otherwise be an overwhelmingly complex reality" (Ibid). These stories, in turn, "set the directions of problem solving" (Ibid). The point, Schon argues, is that each metaphor or "Each story conveys a very different view of reality and represents a special way of seeing" (Ibid). Consequently, each metaphor implies different solutions. In this context, Schon refers to the "Normative leap from data to recommendations, from fact to values, from 'is' to 'ought'" (Ibid). Once the right metaphor, the right framing, is found, the actions needed or the approach appropriate suddenly, Schon says, seem obvious.

In this light, the importance of finding the right metaphors for climate change and related phenomena is clear. Koteyko and Atanasova write about some of the metaphors conventionally deployed in media discussions of climate breakdown. They point out, for example, the frequency with which climate breakdown is constructed via metaphor as a war. They cite Cohen (2011) who shows that British broadsheet newspapers evoke war metaphors in order to tap into national mythologies of wartime steadfastness (Cohen in Koteyko and Atanasova, 2016). The goal, Cohen suggests, is to generate a kind of Blitz spirit with regard to climate breakdown such that people might willingly, even proudly, make the sacrifices needed to address the threat. Much discussion around the notion of metaphor in climate communication took place around the 2021 release of Adam McKay's film *Don't Look Up.* Hannah Little confirms that "The makers of *Don't Look Up* have publicly stated that the film is meant as an allegory or metaphor for the climate emergency" (Little, 2022). The film tells the story of a meteor on a very short collision course with Earth. Scientists try to warn the public and to spur policy makers into taking what few actions might offer some glimpse of averting the comet's course. What the scientists find, however, is a public quick to doubt and to engage in conspiracy thinking, a media capable only of trivializing and policy makers breathtakingly incompetent.

Though recognized by many as an important and accomplished attempt at science communication around climate breakdown, the metaphor at the heart of the film has stirred debate. Charles Bramesco, writing in The *Guardian,* for instance, takes issue with the central meteor metaphor (2021). He points out that "Everyone's blasé about global heating in part because it's so gradual, because it *isn't* a force of instant destruction with a due date in an immediate future we'll all live to see" (Ibid). In other words, the comet metaphor is, in this sense, precisely unlike climate breakdown. Writing in the same newspaper, however, climate scientist Peter Kalmus refers to the film as "the most accurate film about society's terrifying non-response to climate breakdown I've seen" (Kalmus, 2021). Nic Esposito, meanwhile, calls the film "a perfect allegory for climate change"; he writes that "the parallels to our reaction to climate change are too stark and if anything more damning" (Esposito, 2022). Eric Levitz, on the other hand, says it's a "poor allegory for the climate crisis" (Levitz, 2022). He writes, "Most of *Don't Look Up*'s deficiencies as a climate parable derive from a simple fact: Climate change isn't really analogous to a planet-killer comet" (Levitz, 2022). Levitz's issue with the film, in other words, is that it is a poor model of climate change. Finding the right metaphor is critically important. As Schon puts it, "Problems are not given. They are constructed by human beings in their attempts to make sense of complex and troubling situations" (Schön, 1993).

To use, for a moment, the language of conceptual metaphor theory, metaphors for climate breakdown are conventionally developed with climate breakdown as the target domain (the thing that needs explaining) and some other phenomenon (e.g. a comet hurtling towards Earth) as the source domain. In other words, they are developed such that the target concept, climate breakdown, is understood in terms of some other more familiar or more compressed source phenomenon. That this is the case can be gleaned from reading about the metaphor generation process. To return, for a moment, to the example of *Don't Look Up,* we can hear this dynamic in action in the way the film's co-writer, David Sirota, talks about the ideation process. Sirota had suggested to McKay that they make something about climate. Climate, then, is established as the target domain. Sirota further recalls saying to Adam McKay "Climate change, it sort of feels like an asteroid is headed towards Earth, and nobody really cares" (Calhoun, Parker and Tesfaye, 2024). Sirota recalls that McKay

responded by saying “Wait a minute. Maybe there’s an idea there. Maybe there’s a movie there” (Ibid). From the outset, then, the target was to describe climate breakdown and the source domain was this notion of a comet coming towards Earth.

The same dynamic can be seen in action in a 2016 article by Julie Sweetland. Sweetland recalls how, back in 1999, she and her colleagues at the FrameWorks Institute were approached by the Climate Message Research Project (Sweetland, 2016). The project asked Sweetland to help them make the causes of climate breakdown clearer to a broad public audience. Sweetland and colleagues discovered that the primary metaphor then in use - the greenhouse metaphor - was leaving many people confused. Not everyone was clear on how greenhouses were supposed to work. Moreover, even those people who did understand greenhouses did not associate them with menace or danger: the heat trapped in greenhouses is heat people want and heat that helps plants to grow (Ibid). The Frameworks team set about establishing a better metaphor that was more accessible to more people. Sweetland writes, “FrameWorks developed a new metaphor: the heat trapping blanket” (Ibid). The blanket had the benefit of relying on almost universally shared background knowledge about how blankets work. From its establishment at the turn of the millennium, the metaphor has gone on to rival the greenhouse metaphor in popularity. Once again, then, climate breakdown - or a specific element of it - was the target domain and FrameWorks worked to find the appropriate source domain.

While this language of source and target domains is useful in understanding this dynamic, this chapter and this project more broadly relies on conceptual blending theory. As such, it is important to translate the ideas of source and target domains from conceptual metaphor theory into the language of conceptual blending. Simple metaphor of this sort - climate breakdown is a comet headed towards Earth, global warming is a heat trapping blanket - are referred to in conceptual blending theory as “single scope networks” (Fauconnier and Turner, 2002, p.127). In a single scope network, as in almost all blends, there are two input spaces (blends can sometimes have more than two inputs). The key feature of single scope networks, however, is that the organizing framework of just one of the inputs is used as the organizing structure in the blend. So, for instance, in *Don’t Look Up,* there is a climate breakdown input and a comet-collision input. The blend, though, takes exclusively

the organizing framework from the comet input. The climate input is present only in the blend through subtext, allusion and, to widen our scope a little, commentary around the film. The input that provides the "frame topography" (Ibid), the organizing framework, is what conceptual metaphor theory calls the source domain. The other input is the target domain. Fauconnier and Turner write that "Single-scope networks are the prototype of highly conventional source-target metaphors" (Ibid). The point of a single scope network, they continue, is "to cast light on the other input" (Ibid). The language they employ in place of source and target is to refer to a "framing input" and a "focus input" (Ibid). A single scope network takes advantage of existing compression in the framing input to cast light on the focus input. In *Don't Look Up* climate breakdown is compressed into the comet, the timespan of climatic change is compressed into the several months until the comet hits Earth etc. The film takes advantage of a commonplace cultural model - a commonplace compression - of a comet hurtling towards Earth and exploits it as a framing device for the focal concept of climate breakdown. Fauconnier and Turner write that single scope networks use "preexisting compressions from the framing input" and "project diffuse structure from the focus input into the already-compressed" framing input (Ibid).

As in previous chapters, I am interested here, again, in emergent Anthropocene cultural models. Another way of phrasing this is to say that I am interested in novel and emerging Anthropocene compressions. As such, I present in this chapter a dynamic that is in essence the perfect inverse of the one underlying *Don't Look Up* or the heat-trapping blanket. Climate breakdown has now been a topic of relatively broad public conversation since the 1970s and of very broad public conversation since the start of the millennium. As a result, there are now emerging and newly established cultural models, cognitive compressions, for climate change and its sub-phenomena (melting glaciers, bleaching coral reefs etc). Consequently, there is a small but growing corpus of metaphors emerging in which climate breakdown or its sub-phenomena are not the focal point (target domain) of the metaphor but, instead, serve as the source domain, the framing input. To my knowledge, this is the first presentation of these novel and emerging metaphors. I see them as very valuable in two principal ways. The first is simple: framing inputs, source domains, are selected for their useful pre-existing compressions. They are selected, in other words, for the taken-for-granted background knowledge they contain. Think again of FrameWorks

moving from Greenhouse to blanket: background knowledge about greenhouses was not ubiquitous nor uniform enough to serve as the basis of an effective metaphor. Everyone, on the other hand, understands how blankets work. When, then, climate breakdown is the source domain, the framing input, for a metaphor, what precisely is the taken-for-granted backgrounded knowledge about it that we are supposed to have access to? In other words, studying metaphors where climate change is the framing input tells us what people take for granted about what climate change is like.

The second reason I see these metaphors as valuable has to do with another property of conceptual blends. One of the key insights of conceptual blending that is missing from conceptual metaphor theory's model of meaning is that projection is not only nor always one-way. Conceptual blending contains an idea referred to as back projection or backward projection in which structure from the blend can be projected backwards onto an input (Polak, 2017). This, as discussed earlier, is how single scope networks work. A blend is created from two input spaces with one of the inputs providing the organizing framework or topography. The emergent insight from this blend is then projected back onto the focus input to shed some additional light on it. Conceptual blending, however, allows for the idea that projection can flow against the current too. In other words, while the prevailing flow is from framing input via the blend to focal input, some flow can occur the other way. William Gordon sees metaphor in this way. Metaphor, Gordon says, has a "two-directional motion" (1961, P.104). So, he writes, when Robert Burns said "my love is like a red red rose", he "does not simply attribute the quality of the *rose* to *my love* but also refines the *rose* in the light of its connection with *my love"* (Gordon, 1961, p.104). In the context of this chapter, then, when climate breakdown is used as source domain or framing input for another phenomenon, we don't simply gain a new insight on the other focal phenomenon, we also gain a new insight on climate breakdown. These metaphors represent, then, an entirely new corpus of climate metaphors arrived at through an entirely different process than the usual one. Ordinarily, like with David Sirota and Adam McKay, metaphors are found by staring climate breakdown in the face, waiting for inspiration to strike and reveal what climate breakdown is like. In the instances I present here, however, the authors' focus has been on something else entirely. Climate breakdown was backgrounded for them. As such, the kinds of metaphors for

climate breakdown presented here are likely preconscious and, as such, all the more interesting.

7.3 New Anthropocene compressions

In conceptual blending theory, a compression is very closely related to Coulson's notion of cultural models. Fauconnier and Turner talk about the idea of "borrowing" compression from one of the inputs in a single-scope network (2002, p.321). As example, they imagine someone warning a friend that they are 'digging their own financial grave' with a bad investment. This phrase sets up two input spaces - a financial investment space and a grave digging space. Fauconnier and Turner argue that the notion of grave-digging is already well-compressed into a cultural model. We can imagine the characters and roles involved, the kind of setting and actions that might be involved etc. On the other hand, we have no equivalent mental compression for making a bad financial investment. The world of financial investments is too complicated, diffuse and abstract for us to be able easily to picture what making a bad investment might actually look like. As such, we borrow the compression from the grave-digging input in order to organize and render more concrete the relationships and activities in the financial investment input. In the Anthropocene, new compressions are emerging (Ibid).

In her article on polar bear visuals, Saffron O'Neil tracks the emergence of a new climate breakdown related compression. She traces the history of how "Polar bears have become the 'poster child' of climate change" (2022, p.1105). She demonstrates that, in the early days of the proliferation of polar bear imagery in media stories about climate, in the first years of the new millennium, "polar bear imagery was denotatively linked to text directly about polar bears" (Ibid, p.1109). In other words, polar bear images were used to illustrate polar bear stories. From there, O'Neill shows, images of polar bears began to be used not only for polar bear stories but for stories about climate breakdown more generally. As such, she writes, "By the 2010s, polar bear visuals were established as a visual metonym, conceptually able to stand alone - without explanatory text" (Ibid, p.1112). In other words, polar bears had

become compressions for climate breakdown. O'Neill captures this when she states, "polar bear visuals began to stand alone along-side ostensibly unrelated climate news, not even referred to in the news story text or the caption, as a shortcut to visually signal that this was a story about climate change" (Ibid). In short order, images of polar bears were then criticized and "viewed as cliché" (Ibid). Sub-conventions and genres emerged. Chief among these conventions is the polar bear perched on a dwindling and drifting ice floe. O'Neill writes, "an image of a bear balanced precariously on a melting iceberg was the most commonly selected image associated with climate change in an Australian study" (Ibid, p.1114). O'Neill's mini-history of polar bear images is a story of compression. Where, originally, the images were expected only to denote that which they depicted - polar bears - over time, more and more meaning and association was compressed into them. Ultimately, they were able to stand alone as symbols of climate breakdown.

In this context, I return to a quotation I introduced at the beginning of this project. When, in 2014, on the occasion of the launch of the IPCC's fifth assessment report, Patricia Romero Lankao of the National Center for Atmospheric Research said 'the polar bear is us', she was engaged in compression borrowing. Romero Lankao's quotation is a conceptual blend and sets up two input spaces: a polar bear space and a humanity space. Compression is borrowed from the polar bear space to compress the diffuse and complicated impacts of climate breakdown on human beings. As such, Romero Lankao's blend helps us see ourselves, because of climate breakdown, as a creature clinging to its rapidly disappearing habitat. Looking back from this vantage point, we can see that what Romero Lankao was doing was producing a conceptual blend to communicate our loss of companion world. The directionality of the blend, however, was opposite to that that I have discussed through most of this chapter. She was using what might be thought of as an element of Anthropocene nature - a polar bear on an ice floe - in order to produce a compression of our human predicament. For most of this project I have been focussed on the aspects of nature falling into traps of mismatch and misalignment. Now, however, I focus on the inverse of that: not the uncanny failure of the old, but, instead, the uncanny emergence of the new.

In order to illustrate the dynamic I am seeking to get at in this chapter, I want to demonstrate that it is now possible to add another layer to O'Neill's story. O'Neill demonstrates that polar bear images begin as specific and, through a process of compression, come to stand more and more as metonym for a more and more general notion of climate breakdown. Where, then, in the early years of the millennium the presence of a polar bear image likely signalled the presence of a polar bear story, by the end of the first decade of that millennium, the presence of a polar bear image could only be said to suggest that the accompanying story was in some way related to climate breakdown.

I now add to this account its next step: the polar bear compression has now become culturally entrenched enough to serve as framing input in blends whose focal points have nothing whatsoever to do with climate breakdown. In other words, it has moved from a convention in climate reporting to a clichéd symbol of climate breakdown and, now, to a new idiom in the English language in general. This is best illustrated by example. The first example I present relates to the British Broadcasting Corporation (BBC). In 2020 Michael Portillo, the former Conservative MP said on BBC's *Question Time* that the BBC "is like a polar bear on a receding piece of ice"[163]. With this comparison, Portillo was seeking to make the point that he sees the BBC as fundamentally unsustainable. Portillo points out that younger colleagues of his - including at the BBC, where he makes programmes - do not pay the licence fee. Because, then, the BBC relies on licence fee money for its funding, Portillo sees this erosion of the licence fee as spelling doom for the BBC[164]. Portillo emphasizes "how quickly this picture is changing" and that it is rapidly becoming too late to save the BBC[165]. This polar bear metaphor, from here, becomes a Conservative talking point in UK politics. It is important to note that, because of their low-tax agenda and belief in the benefits of privatisation, the Conservative party is largely considered hostile to the BBC.

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[163] Varga, J., (2020). 'Like a polar bear on receding piece of ice': Michael Portillo says it 'can't survive'. *Express.co.uk*, 21 February. Available at: https://www.express.co.uk/news/uk/1245352/bbc-question-time-fiona-bruce-licence-fee-michael-portillo-netflix-sky [Accessed 25 March 2025].
[164] Ibid
[165] Ibid

In 2021, Conservative MP Jonathan Gullis uses the metaphor again, this time in the House of Commons. Gullis describes the BBC as “a vast organisation that is reluctant to move with the times, like a polar bear clinging to a receding piece of ice”[166]. For Gullis, the issue is that the BBC belongs to a disappearing world. He describes the licence fee model as “outdated and …not fit for today’s society”[167]. Moreover, contrasting them with the BBC, he says that “Platforms such as Netflix and Amazon Prime have moved with the times”[168]. In 2022, then UK Culture Secretary Nadine Dorries used the metaphor both in parliament and in an interview with the *Sunday Times.* In the latter, she said that the BBC “is that polar bear on a shrinking ice cap”[169]. Dorries continued: "I'm afraid the BBC in its present format, in its present funding model, will not exist into the future”[170]. From there, the metaphor appears in the conservative media ecosystem like, for example, in an editorial in the controversial pro-Brexit *Country Squire Magazine*.

In these examples, then, the compressed image of a polar bear clinging to a dwindling ice floe is used to cast light on the (Conservative perspective) future of the BBC. The BBC is the polar bear, the eroding licence fee base is the iceberg, and the increased competition from private subscription-based platforms is the climate change, the heating. The polar bear compression is used to cast the BBC as a beloved and quaint institution that, despite stirring feelings of fondness and nostalgia, has found itself hopelessly out of step with the realities of the present day. The BBC is presented as belonging to an earlier age or to a rapidly disappearing world. It is presented in a tragic light, as a quaint anachronism that is on a pathway of inevitable decline. O’Neill showed how the polar bear went from illustrating specific polar bear stories to, over time, illustrating more general climate change stories. This BBC example demonstrates the next step: the polar bear image now serves as compression for stories in which even figurative environments change. In

[166] Gullis in Petitions Committee, (2021). *Oral evidence: E-petition session: TV Licensing*, HC 1233, Monday 1 March. Available at: https://committees.parliament.uk/oralevidence/1764/default/ [Accessed 25 March 2025].
[167] Ibid
[168] Ibid
[169] Reynolds, M., (2022). BBC 'like a polar bear on shrinking ice cap', says Nadine Dorries. *Express.co.uk*, 21 February. Available at: https://www.express.co.uk/news/uk/1569217/nadine-dorries-bbc-licence-fee-funding [Accessed 25 March 2025].
[170] Ibid

this case, the media funding environment is changing and the Conservative politicians borrow compression from the polar bear image in order to describe the plight of the BBC.

This metaphor, this blend, in which the image of the polar bear on the ice floe is the framing input exists in contexts beyond this BBC example, though the emphasis in some of them is somewhat different. Jeremiah Moss, for instance, deploys it in his book about the hyper-gentrification of New York. Moss describes finding a trace of old pre-gentrification New York as being like finding “a remnant, a lone survivor from an endangered species rapidly vanishing”[171]. Moss continues: finding a real “dive bar with the Ramones on the jukebox, or that bookshop with a cat lounging atop stacks” is “like finding a polar bear, sweating on her melting chunk of iceberg”[172]. Once again, the metaphor is used here to convey the feeling of watching something cherished succumb to inevitable decline. The image is poignant and filled with nostalgia. Deborah Richmond, meanwhile uses it, tongue partially in cheek, in reflecting on a “Feminism and Architecture” conference. She describes how through seeing presentation after presentation on the metrics of gender in the Architecture profession, one image began to haunt her mind’s eye. This image, she says, was of a “male architect, that Mad Man in silly glasses and tasteful suits, cowering in his corner office, clinging to what’s left of the creative endeavour we call ‘architecture’ like a polar bear clinging to the last piece of ice in the Arctic Ocean”[173]. Richmond, in other words, constructs this vision of the male architect as an endangered, dying species belonging to a vanishing world. She goes on: “In the end, I felt only pity for the groom”[174].

The metaphor has been deployed, too, in relation to higher education. Michael Kelly, for instance, writes in *The Guardian* about the decline of foreign language programmes offered at UK universities. Kelly describes how the marketization of British higher education is making it unsustainable for many smaller universities to

[171] Moss, J., (2017). Vanishing New York. New York: HarperCollins.
[172] Ibid
[173] Richmond, D., (2015). Feminism and Architecture: Women, Architecture, and Academia. *Journal of Architectural Education*, 3-4 April. Available at: https://jaeonline.org/issue-article/feminism-and-architecture/ [Accessed 25 March 2025].
[174] Ibid

offer diverse language courses. Kelly writes that “the falling number of language department[s] nationally puts at risk the academic infrastructure for languages”[175]. What is needed, Kelly says, is a “vibrant community of language centres and departments offering programmes at degree level”[176]. Kelly goes on: “Left to the market, this infrastructure could melt away and leave UK language programmes stranded, like a polar bear on a lonely ice floe”[177]. The metaphor here, in other words, is about the disintegration of a support structure, about the process of being undermined. Interestingly, this article is illustrated by an image of a polar bear on a small ice floe. Here, then, is an example where the kind of visual studied by O’Neill is used to illustrate an article totally unrelated to climate breakdown. Lauren Noren makes a similar point about US higher education in general. In a blog post on the subject, she begins by saying “Higher education is like a polar bear on a shrinking piece of ice”[178]. Noren then goes on to detail the complex confluence of factors that has led to the undermining of the US higher education system. In each of these cases, the same fundamental point is being made: the business model upon which higher education has traditionally relied has been and is being eroded. Increasingly, as a result, institutions that are a product of that business model look like creatures out of time, wrought from their companion worlds.

There are many more examples - Unionists in Northern Ireland are said to resemble “a polar bear pacing about on an ever faster shrinking ice berg”[179] as the demography of Northern Ireland drifts inevitably towards a Nationalist majority and , therefore, likely reunification of the island. The NBA’s business model is constructed as a polar bear too, as it relies on a base of cable television subscribers in the US

[175] Kelly, M., (2013). Decline in modern languages at UK universities shows no sign of abating. *The Guardian*, 8 October. Available at: https://www.theguardian.com/education/2013/oct/08/languages-university-degrees-michael-kelly [Accessed 25 March 2025].
[176] Ibid
[177] Ibid
[178] Noren, L., (2020). US Higher Ed is a Polar Bear on an Ice Cube. *Medium*, 31 July. Available at: https://laura-noren.medium.com/us-higher-ed-is-a-polar-bear-on-an-ice-cube-23001572d4b3 [Accessed 25 March 2025].
[179] McKearney, T., (2017). British ruling class pays scant attention to the North. *The Pensive Quill*, 14 May. Available at: https://www.thepensivequill.com/2017/05/british-ruling-class-pays-scant.html?m=0 [Accessed 25 March 2025].

that is rapidly being eroded by streamer-only households[180]. The funding model is said to be “doomed to a slow and lonely demise”[181]. The UK’s legal system is a polar bear intransigently refusing to move with the times and clinging to an ever more antiquated-seeming business model. The question, then, becomes how understanding the usage of this metaphor is useful in communicating climate change.

7.4 Back projecting onto the polar bear

Seen in the light of these various scenarios - the erosion of the licence fee funding model or the gentrification of New York - we can glimpse the connotative essence of the polar bear on an ice floe compression. What we discover is, perhaps, something quite alarming. As framing input, as source domain, the polar bear compression is used to help illustrate situations in which something cherished and beloved has found itself hopelessly unmoored from its fading companion world. Metaphorical polar bears, according to these examples, are entities adapted to a vanishing world. This situation is presented with some pathos, some regret and nostalgia but, at the same time, with total acceptance. Consider, again, the BBC example. The message underlying the Conservative construction of the BBC as polar bear is that we must regretfully and nostalgically bid farewell to the beloved, cuddly ‘Auntie Beeb’ because, though dear to us, the BBC in its current form is not cut out for the modern world of subscription models and competing platforms. There is no suggestion that the race towards privatization might be slowed nor that the licence fee model might be in some way bolstered.

Polar bear imagery, as climate icon is, Dorothea Born, reminds us “meant to … produce strong emotional responses in the viewer” (Born, 2019 p.651). Polar bear imagery as climate communication is supposed to spur people into climate action. Born notes, however, that in recent times, this imagery’s “effectiveness has been

[180] Crupi, A., (2024). Sports media’s merciless evolution leaves cable TV model adrift. *Sportico*, 26 July. Available at: https://www.sportico.com/business/media/2024/sports-media-evolution-cable-tv-model-future-1234790978/ [Accessed 25 March 2025].
[181] Ibid

questioned" (Ibid, p.650). The evidence gleaned from these metaphors raises further questions. The nature of these questions can be elicited by considering the mappings or correspondences that exist in the blend. Here, for instance, is the BBC-as polar-bear blend:

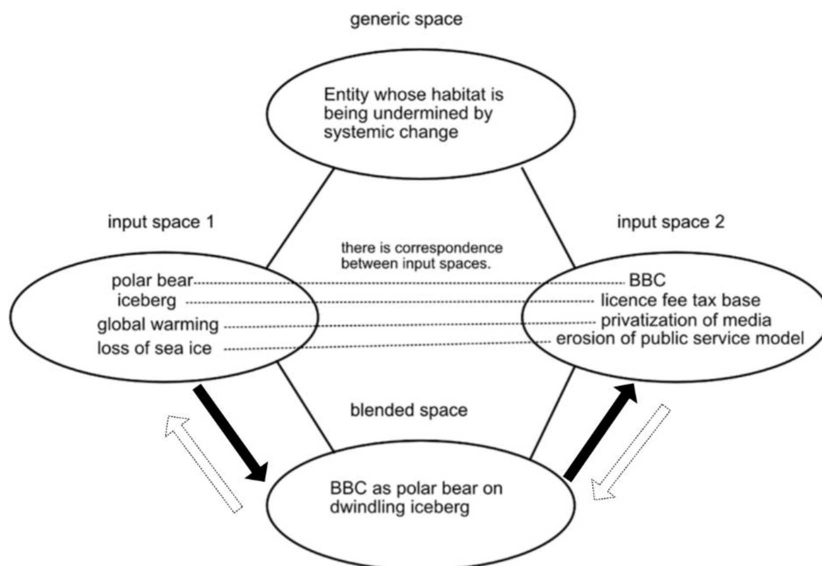

Figure 27: stranded polar bear metaphor - though the dominant direction of flow is from input space 1 to input space 2 via the blend, there is some flow in the opposite direction

In this blend, we see that global warming - the manifestation of climate breakdown pertinent here - is mapped onto privatization of media in the BBC input space. Here, though, is the crucial point. None of the Conservative politicians or commentators who deploy this BBC-as-polar-bear metaphor are doing so in order to mobilize support for stopping or slowing the process of media privatization. In fact, in general, the Conservative party is in favour of increased privatization of media. In other words, the metaphor is not being deployed to counter the metaphorical 'climate change' it entails. Indeed, this climate change of privatization is constructed as a positive with some unfortunate casualties along the way. Consider alongside this BBC example the feminization of architecture example I have cited. Here is that blend:

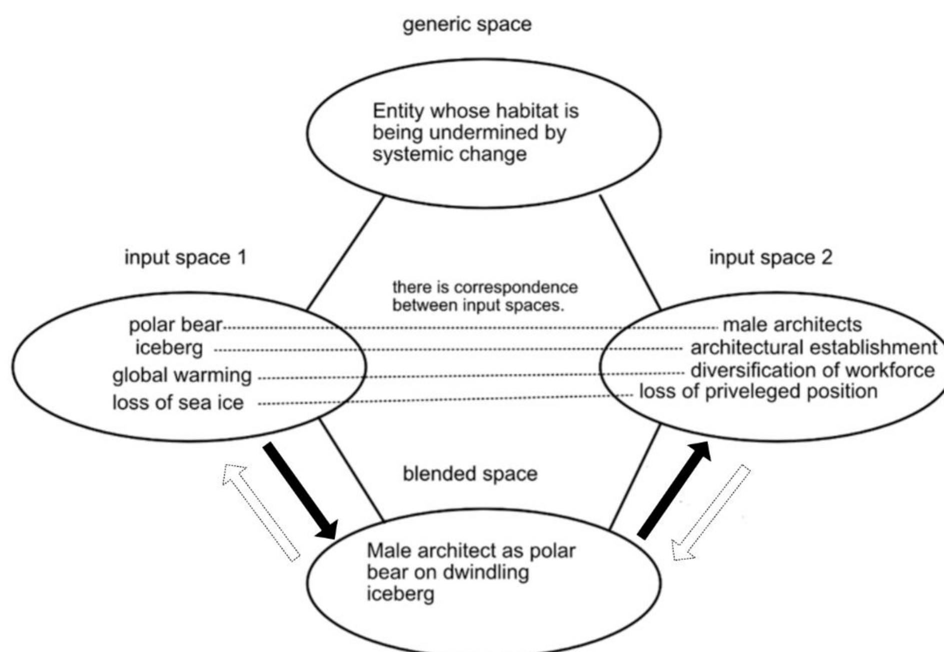

Figure 28: Male architects as stranded polar bears – though the dominant direction of flow is from input space 1 to input space 2 via the blend, there is some flow in the opposite direction. In other words, though the metaphor seeks to develop an understanding of the BBC by means of polar bears, we can also use it to understand polar bears via the BBC.

In this example, climatic change - global warming - is mapped onto diversification or feminization of the workforce. Given the context in which this instance appears - a conference on feminism and architecture - there is no sense at all in which the metaphor is meant to convey a desire to stop or slow this change. In fact, the opposite is true in this case: diversification of the profession is constructed in this piece as progress. In other words, climate change - global warming specifically - maps onto a notion of progress, of improvement. The metaphor, then, is not deployed in a way that leads a reader to think that the metaphorical climate change involved must be halted or reversed. Instead, it simply presents the polar bear - or the BBC or male architects - as beloved but ultimately tragic figures. Richmond presents the loss of the prototypical male architect as a necessary - even positive - step but one that nonetheless carries some feelings of regret or nostalgia for a familiar disappearing world.

Even where the metaphor is deployed to describe what is constructed as negative change, there is no real sense of mobilising action. When Jeremiah Moss, for

instance, uses it in the introduction to his *Vanishing New York,* he produces a blend in which global warming maps onto gentrification or even, in Moss's own terms, 'hyper-gentrification'. This is a trend that he passionately laments and abhors. Nonetheless, the book is not so much a polemic as a mournful record of the changes wrought and inevitable change to come. Moss gives his own work the subtitle, "a bitterly nostalgic look at a city in the process of going extinct". Harper Collins, the book's publisher, describes it as an 'unflinching chronicle of gentrification in the twenty-first century and a love letter to lost New York'. In the book, Moss is said to be 'lovingly eulogizing' a vanishing city. When Moss compares catching a glimpse of this old vanishing New York to seeing a polar bear pacing about on an iceberg then, he is using the polar bear metaphor in the same way as in the other cases. These glimpses of New York are cherished and beloved but are, ultimately, anachronisms from another world that are destined to disintegrate. The note is, as HarperCollins points out, not one of activism but one of eulogy.

Understanding this metaphor is valuable in a climate communications context in two main ways. Both of these rely on the principle of back-projection or reversibility inherent in conceptual blends. In the first, it helps us to understand precisely what is entailed in the metaphor when used in a climate context. Numerous climate communications scholars have asked focus groups and conducted surveys to try to understand the affective meaning and impact of this kind of polar bear imagery. In these metaphors, however, we find a sort of natural experiment. What we discover is that the essential underlying dynamic is, perhaps, not one conducive to inspiring climate action. The basic meaning of the metaphor seems to be a sort of long and tearful goodbye.

7.5 Vanishing Like Glaciers

The second way in which these metaphors are valuable in a climate communications context derives from the fact that, as mentioned, they function in a two-way manner. The importance of this feature of blends is best considered in the context of an example. Take, for instance, the 'vanishing like glaciers' metaphor I mentioned

earlier in Chapter 4. Here are some examples of that metaphor in use in real linguistic contexts:

Table 5: vanishing like glaciers

Entity Compared	Outlet (name and description)	Quote (emphasis added)
Newspaper book sections	New York Times (newspaper)	"What we need more of, now that newspaper book sections are **shrinking and vanishing like glaciers**, are excellent and authoritative and punishing critics"[182].
Italian schools	The Guardian (newspaper)	"Italian schools are **vanishing like the melting glaciers**"[183]
Sports on publicly funded television	The Independent (newspaper)	"Sports are **disappearing** [from the BBC] **faster than the glaciers**"[184]
Attention spans	Reuters (news wire service)	"baseball's leisurely flow has fallen out of step" with "a world where attention

[182] Garner, D. (2012) 'Not everyone gets, or deserves, a gold star', *The New York Times*, 19 August, p. 42.
[183] Giuffrida, A. (2023) '"Vanishing like glaciers": plunging birthrate threatens Italian schools', *The Guardian*, 1 May. Available at: https://www.theguardian.com/ (Accessed: 21 March 2025).
[184] The Independent (2023) 'Independent readers discuss whether BBC TV licence is good value for money as fee set to rise', The Independent, 8 December. Available at: https://www.independent.co.uk/ (Accessed: 21 March 2025).

		spans are **shrinking like glaciers**”[185]
Second-hand bookshops	civfanatics.com (video game fandom forum)	“book stores are **disappearing like glaciers**. I am trying to see as many as I can before they’re all gone[186]”
Skilled crafts-people	woodenboat.com (boating forum)	“Truly skilled and competent people are **disappearing faster than the glaciers**. They are being replaced with computer-obsessed button-pushers”
Local newspapers	Amazon (customer review)	“We need small town newspapers to keep local government accountable and they are **disappearing faster than the glaciers**”
Film photography labs	Japan Camera Hunter (photography blog)	“It is no secret that photo labs are **disappearing like arctic glaciers**”
The suit and tie in the workplace	Etiquetteer (etiquette blog)	the formality of the suit and tie in the workplace is

[185] Reuters (2015) ‘Five storylines to follow during the 2015 MLB season’, Reuters, 2 April. Available at: https://www.reuters.com/article/sports/five-storylines-to-follow-during-the-2015-mlb-season-idUSKBN0MT2H9/ (Accessed: 21 March 2025).
[186] Warpus (2017) ‘Random Raves XLI: One More Trip Around the Sun!’, Civilization Fanatics Center. Available at: https://forums.civfanatics.com/threads/random-raves-xli-one-more-trip-around-the-sun.616934/page-5 (Accessed: 21 March 2025).

		“**fading faster than the glaciers of Greenland**”
American Trade Unions	Fordhookvoice.com (gardening blog)	“the American labor union is now an endangered species, **vanishing faster than an Arctic glacier**.”

There are many more examples of this metaphor beyond those quoted, but these suffice to provide a sense of the various ways in which this novel metaphor is deployed. Because the metaphor is novel and emerging, it has not yet fallen into established turns of phrase (like ‘glacial pace’) and, as a result, the linguistic manifestations of the glacier differ slightly. In some instances an entity is described as ‘disappearing like glaciers’, in others as ‘vanishing like glaciers’ etc. On a more general level, however, what emerges is a new metaphor with a coherent meaning. The metaphor is often used in contexts where it refers to a kind of nostalgia for a lost or vanishing world. It is, like the polar bear metaphor, a way of describing the process of being unmoored from one’s companion world. The loss of glaciers is used as reference point to describe the loss of an old, often analogue or pre-digital, world of real book stores, film photography and local newspapers. Inherent in these examples is a nostalgia for a simpler world and for the cultural institutions and landmarks that formed its familiar, prelapsarian everyday fabric.

The disintegration of glaciers in these examples is used to denote the degradation of standards. In some instances, this is a general kind of dumbing down as in the instances in which vanishing glaciers are equated with shrinking attention spans or newspaper book sections. Elsewhere, the metaphor is used to describe the degradation of standards in the workplace as in the cases where shrinking glaciers denote the disintegration of trade unions or the disappearance of formal workwear. Vanishing glaciers are used, too, to describe the loss of the local due to corporate consolidation and cultural homogenization. This is the case, for instance, where disappearing glaciers are used as reference point to describe vanishing local newspapers or second-hand bookshops.

These examples are valuable because they help to illuminate the cultural meaning and emotional valence of vanishing glaciers. They are, again, a kind of natural experiment through which we can begin to understand what the loss of glaciers is conventionally constructed as feeling like. Each one of these metaphors is a sort of cognitive, emotional model of glacier loss, a model of what the loss of glaciers feels like. As such, taken together, they suggest an emotional register and vocabulary with which to write and speak about this issue. The ways in which the loss of glaciers resonates emotionally and culturally, these examples suggest, is as the loss of an old, simple world and as nostalgia for it. Glacier loss is equated with debasement of standards and the destruction of local character. This glacial example is, however, not the only instance of a novel metaphor of this kind. In the following section, I analyse another case, which I term the 'bleaching like coral reef' metaphor.

7.6 Bleaching Like Coral

Table 6: bleaching like coral

Entity Compared	Outlet	Quote
Institutions	Making Nonsense of It (blog)	Institutions slowly calcify, **bleached like a coral reef**[187]
Washington DC because of gentrification	Threads (social media)	DC is nearly **bleached like a reef** from gentrification
The cinematic mainstream	The Oxford Blue (student newspaper)	At any rate, in our cinematic mainstream **bleached like coral** by the depredations of the

[187] Bollon, P., (2023). *Russel Brand Was a Shagger, The Blind Generation, and Other Nonsense*. Available at: https://pascalbollon.com/2023/09/20/russel-brand-was-a-shagger-the-blind-generation-and-other-nonsense/ [Accessed 25 March 2025].

		superhero franchise, there is something bracing about a film so seriously weird[188]
A personality	Heidi Lasher (Substack)	My dad's insatiable curiosity, sound reasoning, and good humour were **bleaching like coral** before my eyes[189]
Cities (e.g. London)	The Times	Some of our cities are steadily being **bleached by money**. Like the Great Barrier Reef, London is already being bled white[190]
Scottish democracy	BellaCaledonia	In Scotland democracy is dying like a coral reef. When corals are under stress, they expel the microscopic algae that live in their tissues … What has been expelled from our body politic is the democratic process

[188] Haskins, L. (2023) 'Bones and All: "Wait, they eat people?!"', *The Oxford Blue*, 19 January. Available at: https://theoxfordblue.co.uk/bones-and-all-review/#:~:text=Perhaps%20the%20right%20word%20is,and%20serious%20in%20its%20weirdness (Accessed: 21 March 2025).
[189] Lasher, H. (2023) 'Someone you love is suffering', *The Good Question*, 17 December. Available at: https://heidilasher.substack.com/p/someone-you-love-is-suffering (Accessed: 21 March 2025).
[190] Oliver, N. (2016) 'Like the Great Barrier Reef, our cities are being drained of life', *The Times*, 15 May. Available at: https://www.thetimes.com/uk/scotland/article/like-the-great-barrier-reef-our-cities-are-being-drained-of-life-twwttw2k3 (Accessed: 21 March 2025).

		itself[191].
A body (due to MS)	The Guardian	My body was dying like a coral reef.[192]

This novel metaphor offers ways of cognitively and emotionally modelling the climate change related phenomenon of coral reef bleaching. Coral bleaching is a phenomenon caused principally by climate change induced ocean warming, but also by pollution and ocean acidification, in which vibrant and colourful coral reef ecosystems die off leaving behind bleached-white skeletons. Healthy coral reefs are among the most biodiverse ecosystems on Earth. As a consequence, their loss has profound implications for many marine species, some of which may even be pushed to extinction.

This metaphor uses the phenomenon of coral bleaching, which has entered the popular lexicon in recent years, to describe several different phenomena. There is a sense, in some of the examples, that coral bleaching is used as reference point to denote a loss of interestingness. When, for example, the gentrification of Washington DC or London is equated to the bleaching of a coral reef, gentrification is constructed as the killing off of an authentic, rich ecosystem and its replacement by a bland and sterile one. Neil Oliver, writing in the *Times* about the gentrification of cities, uses coral bleaching as an extended metaphor for the gentrification process. Connecting the two domains, he says “when an environment becomes harsh and caustic, the quality of life there is diminished”[193]. Oliver expands on some of the metaphor’s entailments. For instance, he writes that “If carbon dioxide is the acid of the ocean, then money is becoming a corrosive agent in our own living spaces”[194]. As such, he

[191] Gunn, G. (2023) ‘The coral bleaching of Scottish democracy’, *Bella Caledonia*, 23 February. Available at: https://bellacaledonia.org.uk/2023/02/23/the-coral-bleaching-of-scottish-democracy/ (Accessed: 21 March 2025).
[192] Cooke, R. (2023) ‘Writer Robert Douglas-Fairhurst: “The less the body works, the more you appreciate any bit that still does”’, *The Guardian*, 5 February. Available at: https://www.theguardian.com/books/2023/feb/05/robert-douglas-fairhurst-metamorphosis-a-life-in-pieces-oxford-multiple-sclerosis-ms-interview (Accessed: 21 March 2025).
[193] Oliver, N., 2016. *Like the Great Barrier Reef, our cities are being drained of life*. *The Times*, 15 May. Available at: https://www.thetimes.co.uk/ [Accessed 25 March 2025].
[194] Ibid

argues that “Some of our cities are steadily being bleached by money”[195]. Oliver fears that London will be rendered “culturally sterile”, “bled white … made lifeless in its own way”[196]. The example of the ‘cinematic mainstream’ being ‘bleached like coral’ by the influx of superhero franchise films echoes the gentrification paradigm. In this case, too, an ecosystem of small, authentic, interesting and vibrant filmmakers is starved of nutrients in favour of a culturally homogenous, bland system of essentially similar blockbusters. In all of these instances, then, corporate money is constructed as a culturally sterilising influence and this cultural sterilisation is described in terms of coral bleaching. It is interesting to note how in several of the examples the fundamental entailment of expulsion exists. Coral bleaching is ultimately about the expulsion of symbiotic species of algae and this entailment is in evidence through this metaphor.

In other cases, the emphasis is less on the idea of the loss of a vibrant ecosystem and more on the notion of bleached skeletal structures remaining even after their lifeforce has been drained. This is the case, for example, in Heidi Lasher’s description of her father’s age-related cognitive decline. She describes the pain and frustration for both her and her father in seeing his cognitive ability decline even as he appeared, outwardly, to be the same as ever. She writes about how “My dad's insatiable curiosity, sound reasoning, and good humour were bleaching like coral before my eyes”[197]. Her father is still there, but he is no longer the person he once was. In a similar vein, Pascal Bollon writes about the sense in which (UK) public institutions continue to trade off reputations built long ago even as they have been weakened and undermined by underinvestment. He writes that, “Institutions slowly calcify, bleached like a coral reef”[198]: in other words, public institutions continue to exist, but as skeletal degraded versions of their former selves.

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[195] Ibid
[196] Ibid
[197] Lasher, H. (2023) ‘Someone you love is suffering’, *The Good Question*, 17 December. Available at: https://heidilasher.substack.com/p/someone-you-love-is-suffering (Accessed: 21 March 2025).
[198] Bollon, P., 2023. *Russel Brand Was a Shagger, The Blind Generation, and Other Nonsense*. Available at: https://pascalbollon.com/2023/09/20/russel-brand-was-a-shagger-the-blind-generation-and-other-nonsense/ [Accessed 25 March 2025].

As with the previous examples, this metaphor provides cognitive and emotional vocabulary and frameworks with which to think and talk about the phenomenon of coral bleaching.

These metaphors provide thought-starters, ways in, for thinking about how to communicate in resonant ways about some of the most important and urgent uncanny phenomena of the Anthropocene. At the same time, they reveal how these phenomena are affectively modelled in the public mind.

One more example will help to illuminate this idea. In this section I present what I term the 'rising like sea levels' metaphor.

7.7 Rising Like Sea Levels

Table 7: Rising like sea levels

Entity Compared	Outlet (name and description)	Quote
Acts of hate	Sojourners (religious magazine)	A year of rapacious capitalist thugs masquerading as legislators, callous political buffoonery inciting legislative chaos, greasy fingers tweeting too near the nuclear button, acts of hate **rising like sea levels**[199].
Rage and violence against women	Toronto Star (newspaper)	Every week, rage and violence against women

[199] Berger, R. M. (2017) 'Devil and the Deep Blue Sea', *Sojourners Magazine*, November. Available at: https://sojo.net/magazine/november-2017/devil-and-deep-blue-sea (Accessed: 21 March 2025).

		has been **rising like sea levels**. Toxic masculinity reigns[200].
Black femicide rates	Lipstickalley.com (online forum)	Black femicide rates are **rising like sea levels** and not a soul cares![201]
The politics of hatred	Atlantic (magazine)	All the while, the politics of hatred are **rising, like the sea levels**[202]
Tensions	Humanitarian Advisory Group	It wasn't long before tensions were **rising like sea levels**[203]
The Japanese pension burden	The Microscopic Giant (arts and culture blog)	Japan's population, along with its workforce, is dramatically shrinking. **Pensions are rising like sea levels**[204].
The number of elderly people in the U.S.	The End Game (Substack)	As the number of older adults in the U.S. continues to rise steadily,

[200] Mallick, H. (2023) 'Opinion | A terrible loss for women, and another win for toxic masculinity', *Toronto Star*, 21 January. Available at: https://www.thestar.com/politics/political-opinion/a-terrible-loss-for-women-and-another-win-for-toxic-masculinity/article_32072565-c6a1-5d6e-a86c-8aa797a95331.html (Accessed: 21 March 2025).

[201] YuG00fytho (2022) 'Donald Glover asks Donald Glover if he's afraid of black women...', *Lipstick Alley*, 8 April. Available at: https://www.lipstickalley.com/threads/donald-glover-asks-donald-glover-if-hes-afraid-of-black-women.4864035/page-11#post-80900394 (Accessed: 21 March 2025).

[202] Rosen, R. J. *et al.* (2015) 'Can the planet be saved?', *The Atlantic*, 28 December. Available at: https://www.theatlantic.com/business/archive/2015/12/hope-despair-climate-change/421794/ (Accessed: 21 March 2025).

[203] Sattler, M. (n.d.) 'Australia, the Pacific and the C-word: Is climate change a battleground or an opportunity for humanitarians?', *Humanitarian Advisory Group*. Available at: https://humanitarianadvisorygroup.org/australia-the-pacific-and-the-c-word-is-climate-change-a-battleground-or-an-opportunity-for-humanitarians/ (Accessed: 21 March 2025).

[204] Jones, T. (2017) 'Who run the world? Part 1 of 2', *The Microscopic Giant*, 27 September. Available at: http://themicrogiant.com/who-run-the-world-part-1-of-2/ (Accessed: 21 March 2025).

		much **like the sea levels,** you may be happy to learn that someone in Washington wants to do something about it.[205]
ennui	Ever so Scrumptious (blog)	A certain style ennui is **rising, like sea levels[206]**.
The bills	Edinburgh International Book Festival (event blurb)	War in Ukraine and it's getting hotter, hotter, the bills are **rising like the sea levels** and the front door of my flat is rattling in the wind[207]
Rents and house prices	Film Video Umbrella (arts organisation website)	Rents and house prices going up and up **like rising sea levels**, and so many people were drowning.[208]

In this instance, the source domain of this novel metaphor is the anthropogenic global rise in sea levels associated with climate change. As in the previous, glacial, example, each of these examples provides a cognitive-emotional model of what rising sea levels feels like or means. In the previous glacial example, one predominant meaning emerged. In this case, on the other hand, there are at least

[205] Akchin, D. (2024) 'There's a Plan for Us', *Crows Feet* (Medium), 10 August. Available at: https://medium.com/crows-feet/theres-a-plan-for-us-48a21543cf5a (Accessed: 21 March 2025).
[206] Sadie (2015) 'Friday Follies: Tipping Points!', *Ever So Scrumptious*, 24 April. Available at: https://www.eversoscrumptious.com/2015/04/friday-follies-tipping-points/ (Accessed: 21 March 2025).
[207] Jacobs, P. (2022) 'Threads', *Edinburgh International Book Festival: Scotland's Stories Now*, 5 March. Available at: https://ontheroad.edbookfest.co.uk/scotlands-stories-now/threads/ (Accessed: 21 March 2025).
[208] Griffiths, J. (n.d.) 'Part 2: A Beggarly Account of Empty Boxes', *Film and Video Umbrella*. Available at: https://www.fvu.co.uk/read/part-2-a-beggarly-account-of-empty-boxes/ (Accessed: 21 March 2025).

two distinct but associated categories of meaning that emerge for this novel metaphor.

The first is the sense of something dangerous and malign creeping up and getting worse insidiously. This is the meaning entailed in the examples where rising sea levels are used to refer to increases in the politics of hatred, in violence against women or in black femicide. In all of these cases, a toxic and malign phenomenon is growing insidiously. These toxic phenomena are constructed as getting worse, as swamping society, in a way that is imperceptible but essentially inevitable.

On the other hand, there are examples in which the emphasis is less on the insidious and malign and more on the inexorable and impending. In the cases, for instance, where rising sea levels are used to describe the growing pension burden in Japan, the ageing population in the U.S. or the cost of living, the emphasis is on an inexorable trend towards a swamping threat. Public finances, the metaphor suggests, will inevitably become swamped by an ageing population. At the same time, household finances will inevitably become swamped by inflation and a rising cost of living.

Though the emphasis in each of these categories is different, they share the sense of a gradually growing inexorable threat. Once again, these examples are valuable because they transpose the uncanny and difficult-to-comprehend Anthropocene phenomenon of rising sea levels into the everyday language of human emotion. They suggest a blueprint for communicating about rising sea levels. Rising sea levels feels like rising hatred and violence in society or, alternatively, rising sea levels feels like inflation and rising prices.

There are more examples beside these, but these serve to illustrate the fundamental point. Just as the onset of climate breakdown and the Anthropocene serves to break and unmoor existing cultural models, it also brings into being new ones. In the previous chapters, I was interested in finding ways of expressing the Anthropocene through conceptual blends. Ideas like heatwave purple or category six hurricanes emerged as a vocabulary for a new era. In this chapter, I have looked at the other

side of the same coin: not at decouplings but, instead, at novel and emerging couplings.

7.8 X is the Climate Change of Y

I end with the broadest and most general novel metaphor: these are examples where climate change in general is used as the framing input. My first example comes from technology ethicist Tristan Harris. Harris is one of the main participants in the 2020 Netflix docudrama *The Social Dilemma.* Harris was also one of the main voices in the promotional effort around the film. The film explores the ways in which social media algorithms are profoundly altering society on a grand scale. Both in the film and in the publicity around the film, Harris uses a climate change metaphor - that is, a metaphor in which climate change is the source, framing domain. Harris says the broadscale algorithmic manipulation of the global population is a sort of “climate change of culture” or a “social climate change”[209]. In various places, Harris expounds on this central metaphor. Algorithmic manipulation of society, Harris says, us “a system of mutually-reinforcing effects that invisibly turn up the dials of addiction, polarization, isolation, shortened attention spans”[210]. This is the very core of the conceptual blend that Harris produces: like with climate change, a modest change to a very complex network of systems can produce unpredictable and disproportionately powerful effects. He says that algorithmic manipulation of human populations is like climate change because “it's like turning up the dials on these little tiny features of our lives and watching the 2-billion-person ant colony go from being normal, just doing what ants do, to suddenly going crazy.[211]”

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[209] Johnson, E., (2019). Tristan Harris says tech is “downgrading” humanity — but we can fix it. *Vox*, 6 May. Available at: https://www.vox.com/recode/2019/5/6/18530860/tristan-harris-human-downgrading-time-well-spent-kara-swisher-recode-decode-podcast-interview [Accessed 25 March 2025].

[210] Harris, T., (2019). @tristanharris. @aza and countless others worked to name "human downgrading." We hope people will recognize it as the 'climate change of culture' – a system of mutually-reinforcing effects that invisibly turn up the dials of addiction, polarization, isolation, shortened attention spans. [Tweet]. 25 April. Available at: https://mobile.x.com/tristanharris/status/1121211877164326912 [Accessed 25 March 2025].

[211] NPR (2019) How Tech Hijacks Our Brains, Corrupts Culture, And What To Do Now. Available at: https://www.npr.org/transcripts/723671325?storyId=723671325 (Accessed: 25 March 2025).

Harris draws out more and more correspondences. For instance, he compares the advertising business model which underlies the entire algorithmic manipulation system to the fossil fuel industry. He writes that "I think of the advertising business model almost like the fossil fuel era of energy in our energy economy.[212]" He can then extend the metaphor in other ways. He says that decreasing attention spans are "like the Marshall islands" of cultural climate change: that is, they are an early victim, among the first things to become overwhelmed[213]. Jeff Orlowski, the film's director and director of climate documentary *Chasing Ice*, further develops the metaphor. He says "I look at this as a breakdown of our information ecosystem, just like climate change is a breakdown of our natural ecosystem. These platforms are now breaking down our information ecosystem.[214]"

In order to demonstrate why I think it is valuable from a climate communications perspective to spend time studying these metaphors where climate change is the framing input, I will focus in on one mapping or correspondence in particular. I refer to this as the one-degree mapping. In the climate change input, the framing input, there is an idea of a one-degree (or, more often, one and a half degree) increase in global average temperatures leading to profound disruption and change. NASA explains this - they write that "A one-degree global change is significant because it takes a vast amount of heat to warm all of the oceans, the atmosphere, and the land masses by that much. In the past, a one- to two-degree drop was all it took to plunge the Earth into the Little Ice Age" (NASA, 2025). In his metaphor, Harris takes this one-degree change element from the climate input and creates a corresponding idea of a one-degree change in the blend which can then be projected back onto the algorithmic manipulation input. Harris suggests that the algorithmic manipulation of society is like "tilting the floor of humanity by .. one degree, two degrees" (Harris in Orlowski, 2020). His point is to show that a modest-sounding adjustment at

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[212] Rutt, J. (2020) Transcript of Episode 38 – Tristan Harris on Humane Tech. Available at: https://jimruttshow.blubrry.net/the-jim-rutt-show-transcripts/transcript-of-episode-38-tristan-harris-on-humane-tech/ (Accessed: 25 March 2025).
[213] Ibid
[214] Mizuho Group (2021) Speaker Series with Jeff Orlowski, Award-Winning Filmmaker and Founder of Exposure Labs. Available at: https://www.mizuhogroup.com/americas-insights/2021-01-speaker-series-with-jeff-orlowski-director-social-dilemma-film (Accessed: 25 March 2025).

enormous scale produces counterintuitively extreme results. He says, “Like climate change, all I have to do is tilt the playing field just two degrees on the polarization or on the outrage or on the conspiracy” (Ibid) to have things run out of control.

The idea of a one, two or three degree change causing unpredictably extreme events comes from the (framing) climate change input. In that input, of course, the degrees element relates to temperature. In the blend, Harris cleverly capitalises on the polysemy of the term ‘degree’ to re-interpret this degree of change element in terms of degrees of rotation. A small increase in temperature becomes a small tilt to one side. In each case, the basic dynamic is the same - a subtle change of a few degrees leads to catastrophic consequences. Here, then, is an example of the insight I wish to add. This mapping - degrees of temperature to degrees of rotation - can then be back-projected onto the climate change input. Moderately warmed world can be represented as moderately tilted world. This creative insight discovered via the blend, that degrees of temperature can be made to map onto degrees of rotation, can be exploited for climate communication.

In a blogpost on marriage, Bret Legg of the Warren Baptist church makes a comparable move. He produces the notion of “marital climate change”[215]. He describes how this comes about: “Spouses release things into their marriage that gradually changes the atmosphere of the marriage over time”[216]. Legg, here, leverages the polysemy of atmosphere (envelope around the planet and mood of a home) to set up this blend of marital climate change. Once again, this blend offers a creative insight: climate change can be communicated in different ways by thinking in terms of the release of toxins into various kinds of atmosphere.

As with the Venicification examples discussed earlier in Chapter 4, these metaphors are essentially an XYZ blend. There are many more examples in which some phenomenon or other is said to be the climate change of one domain or another. So,

[215] Legg, B. (2014) Marital Climate Change. Available at: https://bretlegg.com/marital-climate-change/ (Accessed: 25 March 2025).
[216] Ibid

for example, falling life expectancy is said to be the climate change of health[217]. Similarly, antibiotic resistance is said to be the climate change of medicine[218]. Cyber risk, meanwhile, is said to be the climate change of the digital world[219] and surveillance is constructed as the climate change of the internet[220]. In all these instances, the fundamental correspondence relates to the notion of a highly complex problem where attribution is difficult, cause and effect is muddled, scale is non-intuitive and individual action feels ineffectual.

7.9 Conclusion

As already mentioned, the novel metaphors in this chapter were discovered as I carried out research on the glacial metaphor. During that research, I discovered one instance of the new 'vanishing like glaciers' metaphor and, because I had developed the idea that glaciers had become bisociated was immediately able to recognise that the metaphor was based on an emerging cultural model of glaciers.

Moreover, conceptual blending theory offered me a blueprint through which to understand and analyse these emerging metaphors. Though this project is primarily focussed on the ways in which Holocene cultural models are falling out of sync with Anthropocene nature. This chapter gets at the same idea from the opposite side. These emerging metaphors constitute evidence of new, Anthropocene cognitive models and compressions. Moreover, the specific instantiations of these novel metaphors constitute cognitive models of the phenomena in question. They tell us, for instance, that the loss of a glacier, in some sense, feels like the loss of a local newspaper or that coral bleaching can be thought of in terms of gentrification. These

[217] Woods, T. (2019) 'Falling Life Expectancy Becoming The 'Climate Change' Of Health'. Available at: https://www.forbes.com/sites/tinawoods/2019/08/30/falling-life-expectancy-becoming-the-climate-change-of-health/ (Accessed: 25 March 2025).
[218] AMR Solutions (2024) 'Conflict-Borne XDR Superbugs: It's Time for the PASTEUR Act*!*'. Available at: https://amr.solutions/2024/07/23/conflict-borne-xdr-superbugs-its-time-for-the-pasteur-act/ (Accessed: 25 March 2025).
[219] Templeton, C. (2018) 'Is Cyber Risk the Climate Change of the Digital World?'. Available at: https://www.rea-group.com/about-us/news-and-insights/blog/is-cyber-risk-the-climate-change-of-the-digital-world/ (Accessed: 25 March 2025).
[220] Thompson, D. (2019) Why Surveillance Is the Climate Change of the Internet. Available at: https://www.theatlantic.com/ideas/archive/2019/05/crazygenius-season-three-privacy-internet/589078/ (Accessed: 25 March 2025).

mini-narratives, of course, offer climate communicators rich and invaluable ways of communicating these phenomena and the affects they produce.

Just as we ought to pay attention to the falling apart of Holocene reference points as offering us potential passwords for communicating climate breakdown, so too should we be awake to the emergence of new Anthropocene compressions. Understanding how these novel compressions are deployed provides us with valuable insight into the discursive construction of several key elements of climate breakdown and, via the phenomenon of back-projection, offers us new models for these complicated phenomena.

In the same way that the unmooring of old Holocene aspects of culture constitutes a kind of climate breakdown in our second nature, so too do these emerging metaphors. Most of this project has been focussed on what it is we take for granted about the old, disappearing world. As we move ever deeper into the era of climate breakdown, however, it becomes ever more important that we begin to pay attention to the assumptions we make and things we take for granted about the new emerging nature.

Chapter 8: Conclusions

In this chapter, I conclude this thesis by outlining what I see as the principal contributions of the research. I also suggest future directions for study that could not be undertaken within the scope of this work.

8.1 Contributions

I categorise the contributions of this project under four main categories. In this section, using these four categories as headings, I consider each of the project's main contributions in turn.

(i) Putting a name to a dynamic in climate communications

The first contribution this work has made has been to point to and name a phenomenon that has existed in climate communications without having been explicitly explored before. In this work, I have sought to demonstrate that the fundamental mechanism underlying disparate pieces and types of communication - from cartoons about *Titanic* to reworkings of Vivaldi's *Four Seasons* and from punning on the notion of 'glacial pace' to reversionings of Shakespeare's famous Eighteenth Sonnet - is essentially one and the same. In all of these cases, the communicators in question are - knowingly or not - playing with the gap that has opened up between - on the one hand - the backgrounded and taken-for-granted models of nature or natural phenomena embedded in the units of culture they are focussed on and - on the other - the shifting realities of those natural phenomena in the context of climate breakdown.

In this sense, this work has contributed, in the first instance, as a piece of analysis of existing instances of climate communication. It has effectively revealed and examined the underlying communicative structure of existing pieces of climate communication in order not only to understand but also to document how they work.

(ii) Systematising a model in climate communications

The second contribution is closely related to the first. The second contribution, however, is about developing the communicative mechanism identified into a coherent, systematised phenomenon. In other words, this contribution moves from the noticing of a pattern into the development of a repeatable model.

In order to do this work, the project has situated the phenomenon identified within a number of existing literatures and research spaces. In particular, the project situates the phenomenon within the following research spaces:

a. Developing a core analogy:

By analogizing from instances of *ecological* anachronism, I sought to port across to the phenomenon under study an extant and coherent conceptual framework. This core analogy takes what was a pattern and adds a structure to it. Developing this core analogy, then, serves an important role in systematizing the phenomenon under study and in moving towards a coherent model. Developing this core analogy also pointed me in useful directions from the point of view of communications. It provided a rationale and reference for my deployment of conceptual blending theory and bisociation.

b. Situating the phenomenon within the field of communications:

As part of that core work of analogy-building, I noticed that instances of ecological anachronism were routinely communicated through conceptual blends. These conceptual blends, in turn, rested on the key communicative principle of bisociation. Bisociation is, as I have detailed in this project, an important concept in the field of communication. Researchers have pointed to bisociation's central role in communicative disciplines ranging from humour and stand-up comedy[221] to political

[221] Andrews, M. (2011. 'Dickens, Comedy and Bisociation'. *Dickens Quarterly*. 28(3) p.185

campaigning and from advertising[222] to performed magic[223]. In particular, researchers have pointed to the fact that a good deal of humour rests ultimately on bisociation as its core mechanism. By demonstrating that the phenomenon of ecocultural anachronism rests ultimately on bisociation, I am putting the phenomenon into dialogue with broader ideas in the field of communications.

Moreover, by demonstrating that instances of ecological - and by analogy ecocultural - anachronism are often communicated via conceptual blends, I am also situating this work within the research space that exists around conceptual blending theory. Again, conceptual blending theory is an important communicative theory, particularly in relation to communication intended to persuade. Several researchers have pointed to blending's central role in advertising and political campaigning[224]. As a result, by situating the phenomenon under study within these research spaces, I have provided for it a conceptual lineage and hinterland within the field of communication studies.

c. Situating the phenomenon in the climate communication literature

The next contribution I point to is also interconnected with the first two. Developing it requires some additional context, which I provide in this section. Having illuminated the pattern under investigation and then having built it up from pattern to model by pugging it into existing research spaces, I then worked to situate it more specifically within the field of climate communication in particular. To do this, I was careful from the beginning to ensure that the model I was constructing answered to what the literature suggested were the two primary challenges in climate communication. I have already detailed these two primary challenges and so will only briefly restate them here.

First Challenge:

[222] Dynel, M. (2011). 'Blending the Incongruity-Resolution Model and the Conceptual Integration Theory: The Case of Blends in Pictorial Advertising'. *International Review of Pragmatics.* 3(1), pp. 59-83

[223] Beeman, W.O. (1999), Humor. *Journal of Linguistic Anthropology*, 9: 103-106. https://doi-org.dcu.idm.oclc.org/10.1525/jlin.1999.9.1-2.103

[224] Dynel, M. (2011).

The first challenge has to do with scale. Changes in the Earth's climate occur at such large spatial and temporal scales that they are essentially inaccessible to our innate tools of human perception. Our sensorial and cognitive tools have evolved to take in and compute reality on a human scale. As a result, a good deal of work in climate communication can be understood as being about compression. This compression can come in various forms. I described, for example, how Jeff Orlowski's documentary *Chasing Ice* engages in temporal compression by deploying the filmic technique of timelapse. In the film, the temporal scale of glacial melting is compressed via time lapse to a timescale appropriate to human perception, cognition and tools and technologies of communication. Similarly, I described how artist Olafur Eliasson engaged in spatial compression in his project *Ice Watch*. In this project, Eliasson and his team towed large chunks of Greenlandic glacier for public display in London. In doing so, Eliasson collapsed the distance between the causes of climate change - high emission Western lifestyles and the financial incentives and flows of capital emanating from financial centres like the City of London - and its most visible effects, such as the melting of Greenlandic glaciers. To use a final cryo-example, I recounted how Saffron O'Neill has traced the ways in which the polar bear has come to stand as synecdoche for climate breakdown. This, in O'Neill's telling, is also a process of compression: one in which disparate complex ideas are compressed over time into a catch-all symbol or icon. It is in these ways, through these modes of compression, that climate communicators have sought to tackle the problem of climate breakdown's disparateness and diffusion.

Second Challenge:

The second reason is more particularly a problem for Western modes of perception. It emerges from the explosive combination of European Enlightenment ideas with the unusually stable climate of the Holocene. Key European ideas about calculability, fungibility, rationality, measurement and order - not entirely by coincidence - emerge in a Holocene climatic context marked by unusual stability and predictability. A qualitative view of nature is replaced by a quantitative one. Nature comes to be understood in mechanical terms as predictable, cyclical, and stable. In this form, nature is increasingly relegated to a role of background for human affairs. It sits as

an unchanging backdrop at the root of all the main pillars of Enlightenment thought. Capitalism, for instance, terminates in the tangible free gifts of nature - a nature in which trees are reduced to yards of lumber and fields to bushels of interchangeable crops. Similarly, new understandings of physics lead ultimately to a model of an inert nature made up of atomic particles whose behaviour is predictable in the context of a set of codified laws.

At the forefront of diagnosing and starting to work through this second challenge is Amitav Ghosh and, in particular, his seminal 2016 polemic, *The Great Derangement*. In that work, Ghosh describes how the Western literary novel form - itself a product of the Enlightenment - has not been able to reconcile or incorporate climate breakdown. This, in effect, Ghosh argues, is a product of the fact that baked into the form itself is a worldview informed by the Western Enlightenment in which nature serves as mute setting rather than as active persona. Nature is, in other words, backgrounded. It is here that the derangement of Ghosh's title lies: Ghosh argues that this backgrounding constitutes a sort of forgetting. He points out that before and beyond The Enlightenment and the grip of its ideas, other ways of knowing exist in relation to nature. In these other ways of knowing, nature often takes a much more active role. It is not relegated to the position of background but instead is granted a supreme kind of agency.

Ghosh's work is as much diagnostic as it is prescriptive. Some of the most valuable work done by Ghosh is centred around his definition of the problem of derangement. Insofar as he offers a prescription, his recommendation is that we pay attention to the ways in which the literary mode of the Uncanny promises rich territory for climate communicators. In the era of climate breakdown, as the coordinates of nature around which we organize our lives begin to slip, the familiar is rendered strange and the strange familiar. As a result, climate breakdown is often experienced as fundamentally uncanny. In it, something long forgotten is remembered. Our collective repressed knowledge of the world as protagonist makes a jarring return.

The model of communication I have developed speaks clearly to each of these challenges. In terms of the first, the mechanism underlying this kind of communication works by the principle of compression. Bisociation and,

consequently, conceptual blending, is a matter of seeing two things in one. Just as compressed into an image of a white Snowshoe Hare against a muddy background are the dual realities of a Holocene 'normality' and an Anthropocene aberration, so too compressed into a cartoon of the *Titanic* hitting an ice cube are two models and models for thinking about the human encounter with ice.

At the same time, the dynamic I describe in this work has all the ingredients required to trigger feelings of the Uncanny. It is about the apparently inanimate or inert springing to life, it is about the mixing of the weird and the normative. It is about the blending of the familiar and the unfamiliar. It is about the unbackgrounding of nature lying dormant in culture. It is about the world turning - quite literally - unhomely to us. As such, the dynamic under study touches on all of the primary themes of the Uncanny. Insofar as it does, it answers Ghosh's challenge of the derangement.

By closely adhering to the contours of these two fundamental challenges in climate communication, I have ensured that the model I have developed is not only relevant but is targeted directly at where experts like Ghosh or Morton suggest the difficulties lie.

(iii) Moving towards practical applicability

By developing a model in climate communications and situating it both in relation to general communications theory and to challenges specific to climate communication, my goal was to produce something practically useful for climate communicators. I see this model as being useful and practically applicable to climate communicators in three main ways:

a. It works on software not hardware

Recall the examples of communication of glacial retreat I have previously discussed. In *Chasing Ice* Orlowski documents the gruelling process of setting up, maintaining and collecting data from timelapse cameras trained on Arctic glaciers. In *Ice Watch,* Eliasson and team engaged in the massively complex logistical task of transporting more than 100 tonnes of glacial ice to London for display. In each case, these

communicative projects carried with them immense and formidable challenges of hardware. They both involved expending immense energy on getting something physical into position.

Because the model of communications I explore here is a phenomenon that takes place in second nature, it is, in effect, a phenomenon that might be thought of in terms of software. When, for example, a cartoonist imagines the *Titanic* not hitting an iceberg, they are leveraging the cognitive software we already have in our heads about what ice means. They are not traversing or manipulating real physical ice but, instead, playing with our mental models of it. In comparison, of course, to the hardware-based projects of Orlowski or Eliasson, working with mental models has a much lower barrier to entry. The cost involved is essentially zero. Leveraging the glaciers we carry around with us - knowingly or not - in the form of cognitive models succeeds in communicating the same ideas as the more expensive and arduous ‘hardware’ based projects do but at a fraction of the investment.

b. Form agnosticism

The second reason I see the communicative model developed in this work as being practically useful for climate communicators has to do with the fact that it is form agnostic. Throughout this work, I have sought to draw my examples and illustrations from a wide and varied range of sources in order to demonstrate this form agnosticism. I have demonstrated the model at work, for instance, in music with the various reversionsings of Vivaldi’s *Four Seasons* discussed. Similarly, I have shown it at work in newspaper cartoons, in poetry, in journalism and in visual art.

This form agnosticism or multimodality is, once again, a product of the fact that this communicative model rests on bisociation and conceptual blending which, themselves, are communicative ideas capable of being multimodal. The underlying instance of mismatch or anachronism is what matters. Having decided on what that central instance of mismatch is, the communicative packaging in which it is delivered can be swapped around. Telling the story of seasonal dissonance can, for example, be done by reversioning Shakespeare’s eighteenth sonnet just as it can be by reversioning Vivaldi’s *Four Seasons* or Cameron’s *Titanic.*

This form agnosticism is a strength of the model I encountered in my own experiments with mobilizing this model into real pieces of climate communication. For example, in one of these experiments (as previously outlined), I sought to transform Deborah Dixon's work on purple's use in heat maps to denote summer heat that was literally off previous charts into some form of persuasive climate campaign. With Dixon having arrived at the fundamental instance of anachronism (old colour / temperature scales being rendered anachronistic), my job became finding the communicative packaging best placed to bring the strangeness - the uncanniness - of this situation out in a way that compressed the story into something that immediately sparked recognition.

I tried and discarded some options before choosing the one I have presented in this thesis. For example, I first arrived at the idea of introducing a purple sun emoji into public discourse as a way of signalling - through emojis - an uncomfortably hot day. This introduction would be accompanied by a traditional press campaign. Ultimately, I discarded this idea on the basis that it requires too much additional explanation (it is not compressed enough) and that it relies too much on the cooperation of several large corporations. Secondly, I arrived at the idea of launching a brand of purple sunscreen with an accompanying campaign around the increasingly dangerous nature of summer. This was a strong idea but suffered from one fatal flaw in that sunscreen is not something only to be worn in dangerous heat and - in fact - may not be sufficient in the most extreme summer conditions now emerging. Ultimately, I settled on the purple hot-sauce campaign idea included in this project. This idea made one lateral move at the outset - transposing the notion of heat into the sphere of spice rather than temperature. From there, it was able to communicate the idea of 'weirdly hot' through its purple colour which subverts expectations for hot-sauce in the same way that Dixon's purple had for weather maps.

I include this brief account of this iterative campaign design process to demonstrate that, throughout, the skeleton of the idea - the weird purple heat - remained the same and what changed was the communicative packaging in which it appeared. As such, the basic instance of mismatch or anachronism, once arrived at, can serve as the

core for a number of different multimodal communicative campaigns.

c. Evidence for the Efficacy of the Model

In thinking about the practical applicability of the model and usefulness to communicators in the field, it is, of course, of real importance to consider the question of its efficacy. In this section, I consider the evidence that exists to suggest that this is an effective model. I begin by pointing out that the model is founded on tried and tested communicative techniques which helps establish it as likely effective.

This model is founded on the way in which instances of *ecological* anachronism have been communicated. In this work, I have focused on conceptual blending because that is the communicative mechanism by which instances of the reference concept - ecological *a*nachronism - have often been communicated. I have shown - to cite just one example - how ideas of ghosts and hauntings are used to communicate both instances of ecological and ecocultural anachronism. Part of the case I make for the efficacy of the model I propose is to point to the fact that it is tried and tested in the analogous case of ecological anachronism. The original anachronism paper by Dan Janzen and Paul Martin - often now cited as a classic - set up the ghostly dynamic. Barlow quotes from the pair's correspondence in which they talk in expressly ghostly language. The ghostly theme has been preserved through the book-length studies of anachronism that have followed. It is afforded a prominent position in Barlow's own *Ghosts of Evolution,* but is no less present in John Byers' *American Pronghorn: Social Adaptations and the Ghosts of Predators Past.* The sense in which the communicative model I suggest can be situated as an evolution of this lineage serves as evidence that it is or is likely to be effective. This is further confirmed by the fact - already mentioned - that Fauconnier and Turner actually use the Pronghorn example of anachronism as an illustration of their conceptual blending in their book on the idea (2002, p.115).

Moreover, as already discussed, this model is further based on the well understood communicative concept of bisociation. Bisociation is effective, in particular, for jolting audiences out of their tacit assumptions. William Beeman in his account of humour gives a clear account of this. Beeman describes the process involved in 'getting' a

joke. He describes how “A communicative actor presents a message … and contextualizes it within a cognitive ‘frame’” (2011). Next, Beeman says, the communicator “suddenly pulls this frame aside, revealing one or more additional cognitive frames which audience members are shown as possible contextualisations or reframings” (Ibid). There is a moment of tension between the two possible framings before an emotional release (laughing in the case of humour) as the audience move from the original assumed frame to the novel, surprising one. Getting a joke, then, involves a moment, quite literally, of re-cognition - of thinking again. No wonder, then, that it is to bisociation that Amitav Ghosh turns when he seeks to illustrate how flashes of what he terms recognition might come about. Bisociation is an important tool in persuasion. There is a rich literature, for instance, on the role of bisociation in advertising. The fact that the communicative model under discussion in this work relies on bisociation situates it within a particular communicative tradition. Seen in this way, this model can be shown to be about tension and release, about challenging assumed framings, about delivering jolts of surprise and about guiding audiences towards ‘getting it’.

The second major indicator of this model’s efficacy is derived from the fact that instances of communicative practice premised on this model have been well-received. This is the case both for pieces of communication made by others and for experiments with praxis I myself conducted as part of this project. The “Uncertain Four Seasons” project, for example, which I have previously described, has been performed by orchestras around the world to positive reviews. Geraint Evans, for example, a marketing journalist with *Forbes* picked a performance of the “Uncertain Four Seasons” as his favourite moment from Cop26. Given the focus and energy that was spent by organizations on presenting themselves well at that conference, it is no small thing for this particular event to have been chosen as the stand-out[225].

Throughout this project, I myself engaged in praxis - as presented earlier. I did this in part to experiment with the communicative model under discussion here and

[225] Evans, G. (2021). ‘The Uncertain Four Seasons: Time For Brands To Listen To The Sound Of Our Future At COP26’. *Forbes.com.* Available from: https://www.forbes.com/sites/drgeraintevans/2021/11/15/the-uncertain-four-seasons-time-for-brands-to-listen-to-the-sound-of-our-future-at-cop26/

determine what kind of reception it would receive from experts in the climate communications field. In particular, two pieces of communications practice I made were premised squarely on the communicative model under study.

‘Thawsaurus’

The first of these pieces of communications practice I called ‘Thawsaurus’. This video has been included in this project and so in this section, rather than reintroducing it, I focus on the reception it was given. I made the video as a way of exploring the notion of ecocultural anachronism and of playing with ideas of mismatch and blending. I entered the video into University of Colorado at Boulder’s ‘Inside the Greenhouse’ climate comedy competition. This competition is aimed at developing new ways of using humour to talk about and inspire action on climate breakdown. The contest is judged by - among others - Max Boykoff, one of the world’s leading experts on creative climate communication. Ultimately, the video was awarded second place in the 2023 edition of the contest. This was a strong indication that the communicative mechanism of the piece was working for others. The bisociation at the heart of the video worked to produce humour that came through. Beyond the award, the video was shown on stage as part of a live comedy show in the University of Boulder in 2023. Comedian Chuck Nice who - as cohost of the *Star Talk* podcast along with Neil DeGrasse Tyson - specialises in the intersection of comedy and science communication called it “very impressive”[226]. Furthermore, the video was used by *Stories to Action* - an initiative of the Bendigo Sustainability Group in Victoria, Australia as an example of good climate communications or participants in its own video contest[227].

Heatwave Purple

I named the second piece of communications praxis I made using the communicative model in this project ‘Heat Wave Purple’. Again, I have already

[226] In Climate Comedy (2023). *April 2023 first 90 mins, see above for FULL SHOW: CU Boulder climate comedy.* Available at: https://www.youtube.com/watch?v=zysA-ECOq1o&t=4083s
[227] StoriestoAction.org (no date). ‘Stories to Action Video Competition’. Available at: https://storiestoaction.org/resources/

described this piece in the project and so, again, will focus on its reception. I entered this campaign proposal into the Environmental Design Studio's Climate Creatives Challenge. Specifically, I entered it into Challenge 5 on heatwaves. Ed Barsley, founder of the Climate Creatives Challenge says that the project is designed to showcase "innovative approaches to climate communication"[228]. The Heatwave Purple campaign received a commendation from the judges which meant that it was included in the compendium book of winning entries as well as in an exhibition of the winning entries held by the Environmental Design Studio. The judges' feedback praised the campaign as making "a clever connection … between extreme heat and a new colour on heat maps"[229]. They described the campaign as having a strong "hook concept" (Ibid). This commendation was another piece of validation for the fundamental communicative model proposed here. These pieces of expert feedback and endorsements are, of course, a form of peer review.

The evidence I have presented here for the efficacy of this communicative model is, I think indicative of real promise for climate communicators. That said, there is certainly room for further systematic audience testing of the model. In the following section, I discuss possible directions for future study.

8.2 Recommendations for Further Study

There are four main categories of further study that would support the work in this thesis. The first is that of audience testing as I have already mentioned.

(i) Audience testing

In this thesis, I have aimed to develop a core model or mechanism that might be mobilised - and indeed has been - to communicate climate breakdown. A clear next step in the development of this model, therefore, is to test it in the field by conducting formalised efficacy studies of campaigns built using it as their core communicative

[228] In Climate Creatives Challenge (2024). *Challenge 05.* Climatecreativeschallenge.com. Available at: https://www.climatecreativeschallenge.com/challenge05
[229] Ibid

mechanism. In order to do this, I would follow Charles Atkin and Vicki Freimuth's guidelines for campaign message evaluation.

Atkin and Freimuth recommend beginning with a preproduction phase of campaign design (2013, p.54). In this phase, they recommend using both focus groups and surveys to test potential campaign messages (Ibid, p.57). She recommends testing three to five examples of campaign elements per testing pass. She suggests that data on responses around credibility, comprehensibility and subjective effectiveness ought to be collected. The campaign examples tested depend, of course, on variables such as the audience demographic participating in the study and the behaviours or attitudes being targeted with the campaign.

Using Atkin and Freimuth's model of preproduction and pretesting research in the case of the model under examination in this thesis might, for instance, involve running focus groups and surveys in which - as per Atkin and Freimuth - three to five draft campaign ideas are tested. Of these, two to three might rely on the communicative model under discussion here while the others might be structured differently. This would allow me to determine whether the communicative model under discussion here is preferred more often than other kinds of campaigns. Of course, there is real difficulty in trying to disentangle the extent to which it is the core underlying communicative mechanism that is of appeal rather than the particulars of the execution in a given case. As such, this focus grouping and surveying process would need to be repeated with different audience segments and with different combinations of campaigns in order to determine whether a pattern emerges.

In order to mitigate - to some extent - against personal preferences clouding the message efficacy data, Atkin and Freimuth recommend testing not only for stated preference but also for attention and recall (Ibid, p.59). As such, they suggest showing a focus groups a series of campaign messages in a row and then asking participants a short time later to describe the messages they recall. This, again, would allow for testing as to whether campaign messages that rely on the fundamental model under discussion here are more memorable to audiences than other kinds of messages.

Atkin and Freimuth also emphasise the importance of conducting tests with participants drawn from different audience demographics (Ibid, p.57). They also point to the importance of researching audience segments in advance of campaign design. Work of this kind is valuable, they say, for the simple reason that a campaign message might be written off as not effective when, in fact, it is simply not effective with a given audience segment but may be highly effective with another.

Systematic audience testing would be resource intensive in that it would involve the design of multiple campaign materials, the running of several focus groups and surveys and the analysis of the resulting data. As such, it was outside the scope of this project. In this project, my goal has been to define the model under discussion, to develop it from a loose set of observations into a more formalised model and to begin the process of testing it as a communicative tool through praxis and analysis of existing communications materials that use the model themselves.

(ii) Field work

The second category of additional work that I think this project points towards is field work. A strength of the model in this thesis is its ability to be localised. To point, briefly, to one example: there are numerous accounts including by Bernard Francou of Andean communities abandoning ancient rituals related to the glaciers they live with because of the extent to which those glaciers have disappeared. Francou describes how, for centuries, local communities in Quecha would travel up to glaciers and break off large chunks of glacial ice for use in the community[230]. These communities have, Francou explains, largely abandoned this ritual practice because of the extent to which Andean glaciers are retreating. The beliefs underlying the rituals - in, for example, the healing power of the glacial water - remains but the tradition itself has fallen out of sync with the landscape because of climate breakdown.

[230] Francou, B. (2015). ‘Global warming spells disaster for tropical Andes glaciers’ *TheGuardian.com.* Available at: https://www.theguardian.com/science/2015/jan/27/global-warming-glacier-depletion-andes

This example, then, fits with the general dynamic under discussion in this thesis - there is a mismatch between nature and culture, changes in nature have undermined cultural practices. What lends this example narrative heft, of course, is its specifics. Amanda Magnani recalls, for instance, how when festival organizers banned the ritual practice of cutting and transporting blocks of ice from the Sinakara glacier during the Andean Snow Star Festival, members of the community broke down in tears[231].

Throughout my work on this project, I have come to realize that this kind of pattern is likely repeated in big and small ways all over the world. The Cambridgeshire village of Thriplow has been forced to move its Daffodil festival earlier in the year by almost a full month since it began in 1969[232]. The Seattleite meme of refusing to use umbrellas is falling out of sync with the world as Seattle's rain goes from its trademark mistiness to heavy because of a changing climate[233]. These are just the examples that have been surfaced by observation. There are likely many more examples than those that have risen to the surface that are yet to be documented.

Field work might consist of travelling to a given region and conducting interviews with locals - particularly those for whom seasonal patterns are highly salient such as farmers, park wardens or people working in tourism - about their observations around changing behaviours and attitudes that have emerged because of climatic changes. Collecting examples of the kinds of mismatches emerging would provide the kinds of specificity and colour necessary to elevate a campaign from informational to narrative. It would also allow for the localisation of campaign messages that would mean they would be highly salient to those living in the relevant area.

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[231] Magani, A. (2021). 'Andean glaciers are melting, reshaping centuries-old Indigenous rituals'. *National Geographic.* Available at: https://www.nationalgeographic.com/culture/article/andean-glaciers-melting-reshaping-centuries-old-indigenous-rituals

[232] Hambling, D. (2022). 'How flower festivals are moving amid changing climate'. *TheGuardian.com.* Available at: https://www.theguardian.com/news/2022/mar/31/how-flower-festivals-are-moving-amid-changing-climate

[233] Clarridge, C. (2023). 'Climate change could turn Seattle into an umbrella city'. *Axios.* Available at: https://www.axios.com/local/seattle/2023/01/31/umbrella-seattle-climate-change-rain

It's important that field work of this kind, if it is to be done, is carried out in the relatively near future. This is the case because those currently nearing retirement from farming, park wardening or gardening positions are likely to have started working in or around 1980. This means in turn that their working lives will have bridged over a period during which the rate of global warming per decade has tripled. The global temperature in 2024 was about 1.47 degrees warmer than the 1951-1980 baseline[234]. As such, it is likely those currently toward the end of their professional lives who will most clearly apprehend an 'old normal' and a 'new normal'.

Field work focused on finding instances of ecocultural mismatch would be of particular value now while the old ways of doing things and the old expectations or normality coincide with the new in living memory. There are likely ephemeral, fuzzy or impressionistic examples of culture / nature mismatches and anachronisms that, without specific attention paid to them, would never be recorded.

From a climate communications point of view, it is, of course, also the case that it is only by collecting these specific examples that a bank of possible campaign ideas and narratives is collected. Different examples have different affordances and offer different communicative possibilities. Heatwave purple, for instance, is a highly visual example. One can imagine the either changes being wrought at the Andean Snow Star festival or the Cambridgeshire Daffodil festival working as the basis for a mini-documentary. The tone, though, of each is likely to be very different. It is only through collecting many examples of these kinds of mismatches that a full palette of emotions and affordances can be compiled for possible communicative use.

(iii) The move from Recognition to action

The third kind of additional research that I see as being of real potential value as follow-up to this work is on moving from the generation of flashes of recognition towards a focus on reliably using those moments of recognition to inspire action. Lesley Head discusses exactly this shift in relation to the changing character of

[234] Nasa (2025). 'Temperatures Rising: NASA Confirms 2024 Warmest Year on Record'. *Nasa.gov.* Available at: https://www.nasa.gov/news-release/temperatures-rising-nasa-confirms-2024-warmest-year-on-record/

Summer in Australia. Head describes how during the Australian summer of 2019, as wildfires burned on an unprecedented scale, “Anxiety dread and anger around climate change [were] being expressed, as the culturally important relationship with summer is reconfigured from a season of leisure and refreshment to one of vigilance and grief” (Head, 2020 p.174). Head, then, is describing a moment wherein the Australian cultural model of summer - as a season of leisure - begins to grate against the climatic reality of the season. She sees that in the opening of this gap, the emergence of this mismatch, there is real potential to generate awareness and to leverage that into transformative action. This, however, Head says, is by no means assured. Head writes that the “seasonal dissonance could be a catalyst for necessary transformative change” (Ibid, p.173); at the same time, however, it could “be absorbed into a new normal”. Head says that “our cultural toolkits foster both transformative and conservative possibilities, which can co-exist” (Ibid). Head explains how, when these moments of dissonance emerge, it is important that their being allowed to fade into a new normal is carefully resisted. Head suggests is that it is important we allow ourselves and each other to truly express our emotional responses to these moments of dissonance. It is all too easy, she says to allow ourselves to be taken in by comforting explaining-away.

In order to flesh this thought out, Head refers to Kari Marie Norgaard’s *Living in Denial.* She explains that when such dissonances emerged in the context of Norwegian winter – when, for example, there was not enough snow for skiing – the media actively neutralised the dissonance by explaining it away or minimising it. In some sense, I suggest, this ideological resistance hints at the potential of these moments of dissonance to puncture conservative, hegemonic ideas. She describes how, for example, during an unusually warm winter in Norway in 2000-2001, several cultural markers and moments were disrupted by the unseasonable weather (2011). Skiing, as mentioned, which is a key feature of Norwegian winter was heavily curtailed (2011 ch.2). Norgaard points out that these dissonances, these moments of mismatch and falling out of sync carried potential to puncture denial around climate change and what needs to be done in response to it. Norgaard says that the local dissonances could have been leveraged to develop the local community’s sociological imagination: helping them connect their local context to global realities.

Norgaard demonstrates, however, that this potential was not only squandered but actively resisted.

She says that 11 local news stories over the course of the winter “made references to the lack of snow or to unusual weather” (2011) but that analysis of these mentions shows that they “talked about the weather in ways that were subtly reassuring” (ibid). Norgaard explains that there was one story that served as an exception to this general trend. This was a news story on the Avent Chanterelle - a mushroom usually harvested in late summer and early autumn. In this story, Stig Dalgard, a local farmer encountered a large Chanterelle in December. This article did not try to explain away the strangeness of the encounter. In fact, it adopted an “apprehensive tone” (Ibid). As such, rather than acting conservatively to guard against concern, this article “was one of the only stories that explicitly opened the door for questions such as “What is going on? What does this mean? What will happen next?” (Ibid) Taken together, Head and Norgaard’s work suggests that it is important that where moments of dissonance and mismatch emerge, they are (i) linked to wider, global contexts of climatic change and (ii) not reassuringly explained away or mitigated against. These moments of nature-culture mismatch present the possibility of puncturing through derangement and denial but only where they are not actively resisted. Both Norgaard and Head, in these pieces of work, begin the work of systematizing what it is that is required to move from using ecological anachronism to produce simple awareness towards the production of real action and change. Further work in this direction is needed. How best might we think, for example, about linking local dissonances to wider global contexts? What strategies have sense makers - journalists, scientists, politicians etc., knowingly or unknowingly - adopted to minimize and explain away the uncanniness of culture-nature dissonances? How might these strategies be guarded against?

(iv) A move from ‘push’ to ‘pull’

Throughout this project, I have considered the ways in which this communicative model of ecocultural anachronism – based, at is, on dissonance and mismatch might be mobilised towards the production of what Dixon terms a warning lexicon. As pieces of communication, warnings are, of course, primarily concerned with

prohibition and discouraging. They are, then, pieces of communication that are principally engaged in what might be thought of as ‘push’ forms of communication. Another space in which I see additional research as being of benefit is in determining to what extent the communicative model presented here is capable of moving beyond that central notion of warning.

Relevant, in this context, is the work of Kate Soper who, through her concept of “alternative hedonism”, has argued that climate communication in general is too reliant on ‘push’ modes of address and persuasion and that it is important that communicators develop modes of communication that ‘pull’ or attract audiences towards more sustainable ways of living (2020). In her *Post-Growth Living*, she develops an idea she terms “aesthetic revisioning”. This is a process, she explains, through which “forms of life once perceived as enticingly glamorous come gradually to be seen instead as cumbersome, ugly and retrograde, thanks to their association with unsustainable resource use” (Ibid). So the supposed glamour, for example, of having the status of frequent flyer with lounge access and free upgrades will cease to function as a mark of prestige and come, instead to function as a mark of something like shame, at least in certain circles. This idea is different to the concept of ecocultural anachronism presented in this thesis but nonetheless there are interesting parallels. There is in the background of the frequent flyer example a certain idea of anachronism: attitudes are rendered out of date by climatic change.

Soper’s interest, however, lies not in how climate communicators might work to underline that shame but, instead, in how communicators might make a positive case for other more sustainable ways of living. She is interested, in other words, not in trying to tarnish the glamour of older modes of living but, instead, in generating a glamour around alternative, sustainable modes of living. The basic thrust of Soper’s argument – that we require climate communication based on ‘pull’ as well as – or instead of - ‘push’ is one I think is interesting to consider in the context of the model explored in this thesis. Thinking through examples presented in this work - how, for instance, might we generate desire or glamour around existing cultural models of ice rather than generating warnings based on emerging cultural models? When climate communication deals with the loss of what we have taken for granted, it often does so in ways that are defined by mourning or in the mode of the elegiac. Can we,

instead, move towards a focus on exciting audiences about what *can* be done and about the kinds of nature we have long backgrounded as given? These are questions that lie beyond the scope of this work but that I see as having real potential in relation to this model.

8.3 Coda

In this work, I have sought to develop and define a novel and generalisable model in climate communications. This is a model based on the notion that the climate is changing dramatically enough to render as anachronistic elements of our culture that have relied on climatic regularities and predictability. I have sought to develop this model in a number of ways. In the first instance, I analysed several existing pieces of climate communication that I see as resting on this model to function. By doing so, I sought to demonstrate that the model explored here is one which has already been deployed – if latently or subconsciously – by climate communicators.

Next, I sought to develop the model further by analogizing from it to the case of *ecological* anachronism. By doing this, I was able to port across communicative patterns and techniques that have promise for the model I have developed. In particular, this analogy led me to focussing on conceptual blending theory and bisociation as they are used in communicating cases of ecological anachronism.

As a counterpoint to these discussions of anachronism, I introduced the idea of uncanny and emergent cultural forms produced by climate breakdown. This, then, is the other side of the coin that is anachronism: what kinds of cultural models can be built atop the uncanny, weird climatic patterns of the Anthropocene?

Finally, I sought to develop this model through some experiments in communicative practice. Working with the model in practice was useful in refining it further and in determining the kinds of ideas it is particularly well suited to communicating.

I see real potential for this model but to be put into practice in a communicative context and also to generate new lines of inquiry in the field of climate communications.

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