ANGLIA RUSKIN UNIVERSITY FACULTY OF ARTS, LAW & SOCIAL SCIENCES

THE EMPIR(E)ICAL SUBLIME: REPRESENTATIONS OF THE SUBLIME IN THREE WORKS OF CONTEMPORARY ANTARCTIC LITERATURE

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ANGLIA RUSKIN UNIVERSITY

ABSTRACT

FACULTY OF ARTS, LAW & SOCIAL SCIENCES

DOCTOR OF PHILOSOPHY

THE ICE LOVERS, NIGHT ORDERS: POEMS FROM ANTARCTICA AND THE ARCTIC AND ICE DIARIES: AN ANTARCTIC MEMOIR

and

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A body of imaginative literature on the contemporary Antarctic has emerged in the last thirty years, an evolution which has definitively updated the aesthetics of literature about the continent beyond the classic explorer narrative personified in works by Ernest Shackleton, Robert Falcon Scott, Roald Amundsen, and others. Since the late 1980s, access to the continent by non-explorers and non-scientists, including artists and writers, has accelerated, and with it the corpus of contemporary imaginative writing about the Antarctic has grown. I examine the strategies of representation I employ in three published works on the Antarctic, a novel, a collection of poetry and a memoir, all of which were inspired by my year as writerin-residence with the British Antarctic Survey, and by six years of subsequent travels to both the Arctic and the Southern Ocean with BAS. The Antarctic is shown to have a complex and contradictory character: ephemeral yet dimensional, physical and metaphysical. I explore how my literary work makes use of familiar tropes of the sublime but updates them through exposure to 'scientific' cultures and the specific lexicon of the modern Antarctic, ultimately employing what I and the philosopher Emily Brady term the empirical sublime. I analyse my work's exploration of the evolving relationship in philosophy between climate change, the sublime and new conceptions of humans' relationship to the planet such as the Anthropocene and hyperobjects. A discussion of the linguistic and representation strategies of my work elicits an argument that climate change has introduced a new iteration of the sublime, which Brady has termed 'environmental sublime'.

Keywords: Antarctica, Antarctic literature, polar literature, the sublime, the empirical sublime, science writing.

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Note:

Some specific Antarctic terminology and concepts benefit from explanation immediately on the page; footnotes have been used instead of endnotes.

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Introduction: Imagining Antarctica

'Antarctica is, traditionally, unwritable. Sustaining this idea is the powerful trope of the continent-as-canvas, the "wide white page" ... the canvas or the page itself is essentially beyond representation.'

Elizabeth Leane, *Antarctica in Fiction: Imaginative Narratives of the Far South* (2012, p.1)

What writer has not felt the fear and simultaneous thrill of the blank page?

Blankness, nullity, emptiness, absence: the anticipatory allure and challenge encoded in such metaphors have been central to the appeal of the Antarctic continent—as much as to the human imagination overall, one could argue. What is writing, especially imaginative writing, other than an urge to fill a void, to create something from 'nothing'?

The Antarctic occupies a unique position in our conception of planet Earth. It is definitely there: an ice-covered landmass, a breakaway republic from the era of Gondwanaland, moored at the bottom of our planet. But for many people who have no likelihood of going there or encountering it in any experiential way, Antarctica remains an abstraction. Antarctic scholar Elizabeth Leane alludes to the essential paradox of representing the continent in her introduction to *Antarctica in Fiction*, her monograph on the history, tropes, and aesthetics of Antarctic imaginative literature: 'This Antarctica is ground, not figure – it is nothingness, and nothingness cannot, by definition, be depicted' (2011, p.1). The lack encoded in 'nothingness' seems self-evident, yet it is worth noting the word functions as both metaphor and actuality: in Antarctica, there really is an absence of variegated landscape, of visual contrast, of human history and society, an absence of even 'landscape' itself, as environmental historian Stephen Pyne has observed (1987).

As much as Gondwana drift, human imagination has provided the genesis of the continent. The Greeks imagined Antarctica 2,100 years before the southern polar regions were confirmed to harbour a landmass covered in snow and ice,¹ at a point even before all reaches of the Mediterranean, the most ancient of seas, had been mapped. In *The Spiritual History of Ice*, Eric Wilson's definitive study on ice in the Romantic imagination, Wilson reports that Aristotle first speculated in *Meteorology* (330 BC) that the earth was bookended by cold regions at the poles: *Arktikos* in the north and its antithesis, *Antartikos* in the south (2003, p.143). The fact that the continent was conceived of two millennia before its physical existence was confirmed is key to its dual character as a psychic and terrestrial anchor to our conception of the planet, Wilson writes, and has contributed to its spectral, speculative quality. At once physical and metaphysical, the continent's ambivalent relationship with humanity has been the subject, overt or covert, in most of the imaginative literature written about the continent (Pyne, 1987; Fox, 2005; Leane, 2011).

With this duality of character of the Antarctic—ephemeral yet concretely dimensional—in mind, the writer faces the task of interpreting and rendering both aspects of the Antarctic to an audience who will most likely never have any personal interaction with the place. Other concerns arise from the particular mission I undertook to write the books I cite in this study. In 2005 I was awarded a year-long fellowship with the British Antarctic Survey (BAS). My proposal was to write a novel (eventually published in 2009 as *The Ice Lovers*) which reflected the concerns of contemporary Antarctica and which was informed by science. For the first time in my life as a writer, if I wanted to write the book I had already conceived of as an idea, an internal dream, I would need the support and patronage of a large, complex scientific organisation. In return for the fellowship and sizeable price tag on placing

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¹ While James Cook sailed to what is thought to have been as close as 150 miles from the landmass in 1773, the actual date of discovery of the Antarctic landmass is usually given as 27 January 1820, when Fabian Gottlieb von Bellingshausen and Mikhail Lazarev made landfall at what is now the Princess Martha coast, Queen Maud Land, in the Norwegian sector of the continent today.

a writer in the Antarctic, I felt a loyalty to my sponsors, BAS and Arts Council England. I also felt a responsibility to accuracy more akin to a journalist's, even if a meticulously researched, fact-based approach is not necessarily the most conducive strategy for writing a novel.

In the end I spent six years (2005-2011) working with the British Antarctic Survey. This continued exposure to the organisation and to earth systems science informed my published books on the polar regions: *The Ice Lovers* (2009), *Night Orders: Poems from Antarctica and the Arctic* (2011), a collection of poems, and *Ice Diaries* (2016), a memoir/travel narrative. In this essay I examine the contribution made by my three books to a growing body of literature about the contemporary Antarctic, with particular attention given to my exposure to scientific communities and my use of an idiom inflected with science and its protocols. I will discuss how my work encounters and expresses the sublime, gravitating to a concept of the 'empirical sublime'—a concept formally theorised by philosopher Emily Brady but one at which I also arrived independent of her work.² I will show how the so-called scientific and the lyric collide, purposefully, in my work. I will begin analysing my interpretation of the sublime through a close reading of poems from *Night Orders* before moving to my novel *The Ice Lovers*, then to *Ice Diaries*.

The sublime is an enduring concept in representations of the polar regions, and to icy landscapes more generally. Central to my work's contribution to contemporary imaginative literature on Antarctica is my understanding of the sublime as metaphor—ultimately in our present historical moment, for climate change. In their authoritative reader on the sublime, Ashfield and de Bolla state that

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² My use of the term 'empirical sublime' dates from June 2015, when I had early discussions with a student who would subsequently become one of my PhD supervisees, who is writing a collection of poetry based on her father's records and papers from when he served as a geologist in Antarctica. The term just occurred to me. We were discussing the aesthetics involved in writing poetry based on texts full of data and 'scientific' language. I hadn't yet read Emily Brady's *The Sublime in Modern Philosophy: Aesthetics, Ethics and Nature*, which was published in 2013 and in which she also refers to the empirical sublime. My student subsequently alerted me to this. Brady's conception of this term is definitive, backed by a decade of study on the sublime, whereas my use of it was instinctive. I subsequently read Brady's 2013 work.

the sublime 'has no analogue in the world of forms' (1996, p.14). They argue for the possibility that the sublime is actually a metaphor for 'the transactions between inner mental states and the qualities of objects in the world' (Ibid.). What interests me most about the sublime is its durability and flexibility as a concept, over time, as cultural, economic, political, and scientific changes make their impress felt on the structures of our relationship with the natural world. It is possible that the sublime may even warrant re-interpretation, in the face of the reality of climate change. As I will explore here, the contemporary sublime is both challenged and updated by the phenomenon of anthropogenic climate change.

What is evident is that the paradoxes and complexities of the Antarctic create an unusual charge in the sublime, which is reflected in much of the imaginative literature on the continent. In my analysis of my treatment of the sublime in my own work, I will draw upon the work of philosopher Emily Brady and that of literary critic Erich Auerbach, whose *Mimesis*, originally published in 1946, remains the definitive study of representational strategies in narrative, to analyse how my own work reflects the increasing influence science and its quests, values, practices, and idioms exert on the Antarctic. I perceive that in an era when climate change is making itself felt on our lives in appreciable ways, the mission or burden of representation and interpretation ceases to be a wholly aesthetic one, particularly where nature writing is concerned. Metaphor, mimesis, and the sublime are all powerful tools for interpreting and representing the Antarctic: for itself, its terrestrial reality, but also increasingly in what BAS (2015) and Greenpeace (2018) have separately termed its role as a 'barometer' of climate change.

Tracing Paper

The Antarctic in its purest, perhaps most stereotypical form, resembles a piece of white paper. The Antarctic plateau, in some places three kilometres above sea level,

is a literal desert,³ an unusually complete scene of erasure visited upon the human eye. Often, looking at Antarctic environments is physically painful, even under cloud, because of the glare from ice and snow—a 'barking, infinite light', as I describe the light of an ice sheet in my memoir *Ice Diaries* (2016, p.347). This phrase actually first appeared in my novel *The Ice Lovers*, voiced through Nara, one of the novel's protagonists, who is a scientist and at the opening of the novel newly arrived in the Antarctic. Her first trip off base is unexpectedly elongated by a storm in which 'even under cloud the snow glared a hollow grey-white. On the rare occasions when they saw the sun, the white glare of the snowfield burned her irises' (2009, p.52).

The prose gives a great deal of attention to the visual effects Nara encounters on the continent, and to the action of looking more generally. Looking and moving are actions that provide a point of reference for my use of the sublime in my work. In his survey on representations of the Antarctic in visual art and literature, *Terra Antarctica*, William Fox states his motivating interest in writing the book was 'how the human mind transforms space into place, or land into landscape' (2005, p.xvii). This, Fox writes, 'is most easily traced when watching the mind work in large, unfamiliar, and relatively empty environments, where we often have difficulty understanding our personal scale in space and time' (Ibid.).

As investigative methods for the writer, looking and doing acquire an urgency in Antarctica. The relative lack of human history, sensory data, and the continent's inaccessibility give texts about the Antarctic the kind of exploratory charge otherwise accorded to space missions. The writer has to overcome perceptual as well as metaphysical difficulties to engage with its seemingly monotone landscape and its antiseptic ecosystem, with its purified, dry air that cracks the skin on your lips, and the absence of insects or dust motes or anything living at all.

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³ On the East Antarctic plateau, the annual precipitation is circa 50mm.

In other ways also, creating literature about Antarctica was more laborious and effortful than I had ever experienced before. My research took a toll, physically, emotionally and intellectually. To write *is* work, of course. The novelist Rachel Cusk unpacks the labour of rendering in writing—she is referring to fiction-writing—in an article for *The Guardian*:

The reattachment of the subjective self to the material object is where much of the labour of writing lies – labour because, in this one sense, writing feels like the opposite of being alive. The intangible has to be reversed back into tangibility; every fibre of subjective perception has to be painstakingly returned to the objective fact from whence it came. (2013)

This reconstitutive labour of writers is at least in part directed at the evocation of place. Almost all fiction and non-fiction evoke a place or are set somewhere. A key theorist of the philosophy of the aesthetics of nature is Timothy Morton. In *Ecology Without Nature* (2007), Morton argues that since Descartes and Newton we have created a theory of an ambient-ness, or ambience, of the environment to protect ourselves against the surety of vast, empty space and the threat it presents to our existence. The Antarctic starkly refutes such a strategy of submission via description in its reluctance to provide sample phenomena for writers and artists to describe in a representational manner. The sublime appears as a potential arbiter between the existential threat posed by vast, inhuman, and inhumane space and the Antarctic's lack of 'biota' (Pyne, 1987). It aids the representation of the unrepresentable. As a concept and a metaphor for the Antarctic, the sublime cuts across and through dualities and distinctions: surface and depth; there and here; nothing and something; observational, empirical data and subjective experience, space and place.

Using my own work as a source text, I will now examine how the empirical sublime has emerged in part as a product of a cultural shift in representations of the Antarctic as it has moved from a putative Age of Empire to an Age of Science. How the aesthetics of Empire became those of the Empirical is in part chartable through

works like mine, written through the agency and patronage of a scientific organisation. I will concur with Antarctic scholar Elizabeth Leane's assertation that the notion that the continent is un-representable is 'only one of its many fictions' (2011, p.2.) The real question is not whether the continent can be rendered in imaginative writing, as there are indeed many works dedicated to this project,⁴ but how the writer employs a scant human history and the resultant metaphor and language available to make the continent real and relatable to a distant readership.

I will show how the pure act of writing and the life-cycle of ice are entwined in a duet in my work; they refer to each other, cross-referencing their substances. The writer's tracings on a page accumulate just as the ice mass of the continent runs in outflows of a capillary network of ice streams and glaciers draining into the sea. And just as the writer's footprints across its surfaces are efficiently erased by the scouring wind, traces on a page encounter the imaginative seizure the continent so effortlessly enacts. The blare of the empty page and that of the Antarctic ice sheet merge, making writers out of explorers and explorers of writers, all fanning out into its heart of whiteness.

Science and the empirical sublime

Thomas Weiskel, an authority on Kant and the Romantic Sublime, describes a sublime landscape as a 'place of the most terrible beauty' (1975, p.112). While varied in form, my fiction, poetry and non-fiction investigate these oppositional forces through pairing the lyrical with the empirical. Each book employs differing strategies to create a distinctly empirical vision of the continent as a source of knowledge and power, highlighting the tension between the two modes of

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⁴ Elizabeth Leane keeps a comprehensive list of imaginative works published about Antarctica on the University of Tasmania website at: http://www.utas.edu.au/representations-of-antarctica/fiction,-1950-adult

expression. Within and through this tension, I assert that a fusion of the two modes, lyrical and empirical, is created.

As a concept, the sublime has been continually reinterpreted for at least a thousand years, taking as its point of origin Longinus' influential study which has never been dated more precisely than having originated in the first century AD (Brady, 2013). In recent decades philosopher Emily Brady has emerged as a key theorist on the sublime, writing extensively on Kant's distinction between the mathematical and dynamic modes. Her work has focused on contemporary aesthetics and the ethical dimensions of the subject position of the human as the locus of the sublime (Brady, 2003; 2013). While the varying conceptions (mathematical, dynamic, empirical) have distinct metaphysical charges, Brady notes that each refinement of the sublime in the twentieth and twenty-first centuries acknowledges the centrality of the perceiver. In both dynamic and mathematical modes, the sublime may produce transcendental feelings, but it is not in itself immanent, nor is it a *deus ex machina*. It exists because of the perceiver, determined and assigned by the human consciousness, and is therefore a project and product of humanity, not an intrinsic characteristic of nature (Brady, 2003).

Given that a perceiver is central to the drama of the sublime, fictional personages present an experiencing consciousness via which to explore the complex character of the sublime. Through my characters I investigate the abstract and mutable association between the perceiver and the provoking place, vision, or landscape. Helen, the character who voices the following passage from my novel *Ice Lovers*, is a journalist with a more profound grasp of science than I possessed when I went to the continent. Helen expresses the (for her) irrational disquiet the physical reality of Antarctica inspires:

Is it really a place, or a giant outdoor laboratory? I feel sorry for it sometimes. Us crawling all over it with our theorems of exploration, elaborate computer models, me with my story of death, those dead bodies of explorers grinding through the ice even as we speak. We could disappear into it. This place could swallow us whole.

I don't tell David that at times here I feel as if I have been filled with lead. I feel I ought to pray – me, the atheist. I have never felt this before, not in the most violent deserts. Pray for what, to what? For absolution, for protection from the cold-eyed God who sits suspended in this upside-down sky. (2009, p.192)

Helen is trying to locate the Antarctic's particular sublime: an exaggerated version perhaps, which teeters on the edge of its antithesis. It is anti-sublime in the sense that the human consciousness struggles to get a sufficient reading from the Antarctic in order to process the awe required to access the sublime. As Pyne notes in his survey of the history of the literature and art of Antarctica:

[The Antarctic] was an esthetic sink, not an inspiration. Its landscape erased those elements which provided the artistic conventions that made other newly discovered worlds accessible, and its fantastic isolation seemingly defied any but self-referential attempts to assimilate it. (1987, p.150)

The tension between the sublime and anti-sublime Pyne describes is presented in my work as key to the Antarctic's fascination. Each of the quartet of characters, two female, two male, in *The Ice Lovers* express versions of this clash. Their awe, disorientation, and confusion overpower more conventional notions of beauty and wonder in encountering such a total and unforgiving wilderness.

Since the signing of the Antarctic Treaty in 1959, the continent has been politically, legally, experientially, and logistically given over to science. While the importance of science on the continent would seem self-evident, its relationship to the sublime has not been explored in imaginative literature with consistency. Leane suggests that the qualities often attached to science are also those attributed to the Antarctic: 'coldness (objectivity, neutrality); purity (altruism); sterility; distance from worldly affairs; a sense of unlimited vistas waiting to be explored' (2011, p.7). In the totality of its dedication to science, Leane suggests, the Antarctic supersedes its territorial reality to become a metaphor for science itself.

Similarly, Helen, the journalist in *The Ice Lovers*, comes to conceive of science as a metaphor-narrative elevated to a mythic scale by climate change. In

tracing her own engagement with scientific stories she begins to perceive the deterministic power of narrative:

when I started to write about science, I discovered a new crop of endgames: glaciers which had accelerated far beyond their predicted velocity, local species extinctions, red algae blooms, the water poisoned by it, plankton and krill asphyxiated. *The species which will die out are those which are unable to adapt in time*. I wrote lines like that, passing sentence on entire categories of creatures, the end of certain species of temperate latitude fruits, a type of whale. The end, even, of winter.

People rapidly become accustomed to stories of ending, I found, until it is really the only story they will consent to hear. (2009, p.18)

As Helen comes to learn in the Antarctic (and as I also found out first hand), 'science' actually denotes a wide range of practices and concurrent languages, bringing together textual and visual lexicons of, amongst others: narrative report, popular science, journalism, observational data, graphs, charts, temperature diagrams, physics, pure maths, glaciology, oceanography, and atmospheric chemistry. In its data-gathering focus and in an age wherein mathematics and computer modelling are central to polar science,⁵ science is often associated with the empirical.

The word is derived from the Greek word for experience: ἐμπειρία (empeiría). It is connected to doing: the Collins Dictionary (2019) defines it as 'based on, concerned with, or verifiable by observation or experience rather than theory or pure logic'. In philosophy, however, the term has a specific meaning: '[knowledge] derived from experience rather than by logic from first principles' (cf. Kant's conception of a priori ['from the earlier'] and a posteriori ['from the latter'] knowledge; for Kant, most types of scientific knowledge are a posteriori, as is experiential knowledge (1787, p.43). What unites the empirical and the lyric mode is the centrality of experience to their expression, in that lyrical language benefits from perception, observation and emotional engagement with its object. The Antarctic, I

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⁵ See: https://nsidc.org/cryosphere/seaice/study/modeling.html

suggest in my introduction to *Ice Diaries*, is a fundamentally empirical realm where 'information, experience, and endeavour are welded together.' (2016, p.xv).

Ice Observations

Poetry is a comparatively abstract form. Its ability to allow materialist and transcendent modes to coexist—and in fact its explicit refutation of boundaries between them—creates modes of affect that have the capacity to, as literary and cultural critic Lauren Berlant argues, 'force[s] realism into speculation' (2011, p.30).

The 'ice diary', a term for a climate/weather expedition log, has a long lineage in polar exploration and navigation. Scott, Shackleton, Nansen, Mawson, and others kept detailed records of the environmental conditions they encountered, although the most assiduous chroniclers of the state of ice were the mariners who explored the polar regions before the era of terrestrial expeditions, and those who captained the support vessels upon which Heroic Age expeditions depended for survival (Mocellan and Suedfeld, 1991). In such diaries the act of recording is paramount. Records are kept for the purposes of observation and accuracy. They were trustworthy guides to the otherwise uncharted and often treacherous waters.

My poem 'Ice Observations', published in *Night Orders* (2011), was written in conscious conversation with ice-observation texts I read for my research for *Ice Lovers* and *Ice Diaries*. I adopted the formal characteristics of the mariner's logbooks I had access to, both from the ships I travelled on and published accounts. Each poem in the sequence is announced by a time and date marker: the month and day (but not the year). This also gestures to data observation-based scientific records, which are always accompanied by a time and date stamp. A more allusive connotation is that the notation of time and place means someone is paying attention enough to note what they encounter; the record is an existential watermark.

The poem begins 'April 17, 1am'—late autumn in the Antarctic, when the sea ice is fast hardening. The first stanza is mostly composed of observational language which would not be out of place in an actual ice journal: 'Pressure/fast and ruddered. Noise like/heavy surf./Stern shallows. Floe/shadows. Heavy strain./Riggings weakened.' (2011, p.23). A subsequent stanza introduces the internal elocution of the narrator, a voice, we learn, riven by uncertainty: 'May 24, 11.44pm. Old ice fast/then breaking up/dark water-sky, indigo -/a mirage. A shimmering/humid city./Frost smoke, thin angora/mist./We never see the moon' (2011, pp.23–24).

These lines judder, truncated and un-iambic, bleached of meaning. Their telegrammic surety begins to communicate the opposite of a scientific datum: an atmosphere of uncertainty. Such a zone of inquietude can be intellectually bracing. A fragmented security becomes, as Lauren Berlant writes in Cruel Optimism, an 'encounter'; the reader enters the frisson of 'the episode, the elision, the ellipsis...' (2011, p.34). Berlant's comments emanate from an analysis of a recent, untitled John Ashbery poem, looking at how its language reflects the modes of production in the larger social sphere the language makes referent to. Her point, which I extend into the Antarctic sphere, is that uncertainty is both physical and metaphysical. The tension between these two species of uncertainty is present as a latent capacity in many of my Antarctic poems. For example, in a 'real' Antarctic record, by late-May near twenty-four darkness would reign below the 66th parallel south, so why is the moon not visible? Terrible weather is the likely reason, but the narrator recoils from such bald admissions. The overarching lesson of much classic explorer literature of the continent, best embodied perhaps by Ernest Shackleton's South, is that hope and optimism keep you alive; despair, rather than ice or the avid attentions of killer whales, is the enemy.

It is well-documented that increasing darkness plays havoc with circadian rhythms for those of us forged in the temperate latitudes. The accelerated darkening of the polar regions during the swing seasons of spring and autumn is a force to

behold. At certain junctures one loses or gains an hour of daylight per day (Arendt, 2012; Arendt and Middleton, 2018). By the poem's final entry, on August 9 at 2 p.m., light graces the slice of mid-afternoon hours. The narrator begins to emerge from 'Creep fatigue/meltwater salvation or/turquoise sastrugi.' (2011, p.25). These fragments use empirical words: fatigue besets wood and metal in ice, meltwater is what a ship moves through in close ice, sastrugi river the surface of snow and ice, including sea ice, in narrow rigid waves. All are paired with emotional and/or abstract terms which serve as a correlative to the observable condition.

At the end of the poem, while documenting the bizarre phenomena of the Antarctic skies ('Radiant shower of meteors'), the narrator begins to wonder how it will be possible to return to the ordinary world. The last stanza terminates in a question. 'Who can bear us back/to our latitude/of error?' (2011, p.26). The latitude alluded to is a temperate one, climactically friendlier but less survivable, paradoxically, than the ascetic Antarctic, for being the site of emotions and entanglements. In sum, the poem records the forming and disintegration of ice, but this is actually a metaphor for another kind of meltdown: an emotional one.

Formally, the poem responds to the note-shape of log books and diaries in that lines are short and use seemingly objective language of nouns and verbs alongside the odd charged adjective ('radiant'). But toward the end of the poem the notations become increasingly incoherent. The surrounding environment begins to exert a pressure on the text. The relationship between the environment and the inner state of the perceiver is a familiar Antarctic trajectory of stability-breakdown-reconstitution, as traced in Leane's comprehensive survey of contemporary Antarctic fiction (2012). The reconstruction of the self is enacted through the conflation of external phenomena with an internal horizon of satisfaction. Inner narrative is mastered by a transformation enacted through the external, concrete world: the coagulation-imprisoning-release cycle of the seasonal formation of ice.

The atmosphere of anxiety in 'Ice Observations' is an expression of the narrator/perceiver's awareness of her weak subject position vis-à-vis nature. The

experience-observation matrix of the empirical is not conducted from a neutral position, as Emily Brady (quoting Frederick Beiser) reminds us:

The feeling of the sublime actually requires that our physical nature be vanquished, that we are deprived of every capacity for resistance against nature. It therefore demands that we do *not* have power over nature, that on the contrary it has power over us. (2013, p.92)

Another poem from the collection, 'Glacier, 11pm', is similarly date and time stamped; in this case they provide its title. The poem really was written (at least in note form) on a glacier at 11 p.m., looking at the still-bright sun on that latitude, one of my first experiences of the polar night-long day. I was operating from a scientific as much as literary principle to record the time in order to have a reliable record (note the noun-verb use and its submerged reference to music, as in a *recording*) of my experience. This poem makes a direct appeal to the sublime. It opens: 'A congealed abyss/more sublime/than crystals/Who does not want to merge/with a fabulous angel.' (2011, p.21) The poem refers to messengers as angels—as Rilke knew them to be—who are 'transmitting between the known and the unknown'. These transitory figures come to rest in the Antarctic 'in this denuded Eden' and its 'urn of darkness' as yet to come, but whose shadow is always visible on the horizon in Antarctica: the total winter (Ibid.).

Once again, a poem is ballasted by claiming to be a datum, an observation that conspires in the moment to arrest a rotating world, to pin down a confusing (as it was for me at the time) new regime of near-complete light, day and night. Its final line, however, conflates the concrete and the abstract: 'Moss hours. Our/confessions –.' The line works on a level of consonance alone (the lingual glissando from *moss* to *hours* to *confessions*) but also alludes to the fact that the only growing substance at the latitude where I lived was moss: black moss, invisible against the basalt rocks on which it grows.⁶ The only living terrestrial plant is paired with the haywire hour-

⁶ Antarctic moss is exposed to extreme levels of UVA and UVB light throughout the Antarctic summer. In response to a weak ozone layer it has developed the capacity to reflect or otherwise prevent the absorption of harmful solar radiation. It is the only moss on the planet that can do this.

clock, which makes no sense and becomes only an abstract measure of time in the 24-hour daylight. The scant living nature of the Antarctic is twinned with the abstract realm of thought—in fact, its most private, charged precinct, that of confessions.

A direct collision of the language of science and the nomenclature of love takes place in 'Salinometer', a poem about measuring the salinity of seawater captured at various depths. It takes place in a laboratory (the Salinometer Room) deep below deck on a scientific research ship. The poem begins with the speaker and a companion, a glaciologist, funneling water into 'a device that looks like an ice cream machine' (2011, p.42). Once again, records are kept: 'He funnels the bottles, I record the numbers' (Ibid.) Soon the glaciologist begins to instruct the narrator: 'He tells me Seism means shock/that an elastic medium/can be subjected to two types of deformation: compression and shear' (Ibid). The narrator retorts with a tutorial of her own: 'I tell him about other kinds/of stress and flux: Ludus, Storge, Mania,/Pragma, Eros.' The glaciologist parries that 'P and S waves' ... 'are determined/by elastic parameters' (Ibid.). The narrator and the glaciologist are conducting a duel, overtly talking about their scientific activities but the subtext is emotional. They are speaking the same language in different notations. The poem explores how the empirical and the lyric have seemingly opposed charges, but are in fact united in delivering a fused cold voltage.

In these ways the empirical is consistently encoded in my poems as specific notations of time and place, which allow observations of states of nature and its transformation. In them, the evaluating intelligence required to produce evidence is shown to be capable of being arrested by or absorbed into the expansiveness of the sublime. Such a proposition collapses the regular opposition between art and science, or Romanticism and objectivity. As historian Richard Holmes has suggested, Romanticism and science might actually be reconciled: 'the terms are so mutually

exclusive. The notion of *wonder* seems to be something that once united them, and can still do so' (2009, p.xvi). Furthermore, a reciprocal relationship between us and nature is posited by the empirical sublime. In an essay on contemporary nature writing in *The New Statesman*, Mark Cocker observes:

'[Nature] is not our project. It keeps its own hours. One powerful psychological effect of contact with nature is that it measures what we are not and the specific appeal of books on the subject is that they simultaneously remind us of our relationship with the rest of life but deflate our burdening sense of centrality within it. We become part, not all.' (Cocker, 2015)

The poems collected in *Night Orders* offer an expression of this whole, and also a reconciliation between domains normally quarantined. My aesthetic approach accords with Emily Brady's description of the empirical sublime as an iteration of Kant's conception of the dynamic sublime. In the empirical sublime, Brady argues in a discussion of the sublime and romantic poetry, the 'rarefied moments' which have come to characterise the sublime are twinned with bald observation (2013, p.101). The collision between the lyric, high register of emotional transport and the grounding facticity of measurement of the natural world is not merely an aesthetic strategy; I suggest that it has metaphysical implications, consistent with Brady, who writes:

[the] admiration we feel in the sublime, as well as a perspectival shift of self, can feed into new forms of self-knowledge and potentially ground respect for nature, not in spite of, but very much because of nature's irresistible scale and power. (2013, p.8)

In the empirical sublime, not only does the writer recognise and call upon the facticity of nature and its physical processes, she also positions the natural world on the same moral and aesthetic level as the emotional, internal transport, and so an equivalence between nature and the moral objective of the interpretive project is achieved.

The fiction writer is charged with world-building through language. This world-conjuring is one of the inherent projects of the novel and perhaps its enduring singular achievement: the rendering of a complete experience through language alone.

In writing my novel *The Ice Lovers*, one challenge was to convey the singularity of the place and the thrill of discovering a seemingly extra-terrestrial space, one which had few reference points to ordinary life in the temperate zones. I also sought to reflect a context where the boundary between science and everyday life is difficult to draw. On a modern Antarctic base, everything, even breakfast, is about science. It is almost impossible to gain access to the continent unless you are a scientist or are sent there in service of communicating the aims of climate science. As I explore in *Ice Diaries* in particular, the Antarctic is an élite world. Everyone there is amongst the chosen. In such a totalising situation, experience, emotion, mundanity, and observation are unusually interlinked but in a situation where one's range of experience is reduced, condensed, as Pyne observes: 'The Antarctic experience was powerful but invariant, intense but limited' (1987, p.153).

When I joined the British Antarctic Survey I was officially classed as a 'scientist' for logistics and political purposes, but I was anything but. In order to understand the environment I needed to quickly acquire a cabinet of separate terminologies specific to that world, including oceanography, glaciology, geology, atmospheric chemistry, and physics. I was introduced to a surprisingly expansive lexicon for ice from maritime navigation—about 116 official descriptors of ice exist, according to the World Marine Organisation Sea Ice Nomenclature (JCOMM Expert Team on Sea Ice, 2015)—and also to the peculiar cant of military operations (or *ops* as they are known in the merchant navy and the army, where any word longer than

one syllable is routinely guillotined).⁷ Exposure to so many different terminologies at once was more than a mere process of acquiring new vocabulary, as I will now explore. The Antarctic world expanded my linguistic range of reference for science and the natural world and I consciously employed this new lexicon to express emotion and subjectivity.

In writing my first Antarctic work *The Ice Lovers*, I struggled to employ my newly-acquired range of reference. In Antarctica an inflationary pressure exerts itself on one's language, generated by the pitch of simply being there. I felt under obligation to alight on the superlatives, expressions of thrill and wonder that were the daily linguistic currency of being in the Antarctic—by anyone's estimation a heightened experience—without swamping my language in melodrama or relying upon well-worked similes. A new strategy for rendering place was required.

For one, the relative lack of human history and influence in the Antarctic made it more difficult to enact Anton Chekhov's advice that descriptions of nature should be aligned to the world of man in order to resonate with the reader (Chekhov, 1886)⁸. Also, the particular experience of the Antarctic provokes vaunted language, possibly because—consciously or unconsciously—when faced with Antarctica, a writer's language inflates to meet its challenge. This Wagnerian note the Antarctic instills in language can seem overblown, as James Meffan notes in his essay 'The Nothing that Is', in which he critiques Edwin Mickleburgh's *Beyond the Frozen Sea: Visions of Antarctica* (1987): '[T]he sublime landscape stands as a circuit-breaker to the solipsistic risks of introspection ... Language may carry an inevitable risk of totalisation, of reductive categorisation' (2011, p.34; p.38). As much as I sought to avoid such pitfalls, I also wanted to imbue my characters with something of the see-

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⁷ Logistics in BAS are usually run by personnel who have been in the Royal Navy, Royal Air Force, or the British Army.

⁸ 'When describing nature, a writer should seize upon small details, arranging them so that the reader will see an image in his mind after he closes his eyes. For instance: you will capture the truth of a moonlit night if you'll write that a gleam like starlight shone from the pieces of a broken bottle, and then the dark, plump shadow of a dog or wolf appeared. You will bring life to nature only if you don't shrink from similes that liken its activities to those of humankind.'

saw between rapture and desolation I experienced in Antarctica. I introduced very specific terminology early in the novel, in part to establish credibility as a world-conjurer, but also to accustom the reader to the speculative cast of the continent.

The novel opens on the essential drama of the Antarctic: the usual rules do not apply here, this is unaligned and uncharted territory. One of the novel's four main characters, Nara, reflects on her disorientation in this new high-stakes, live-or-die realm: 'this is a new way of living, we are living each moment as a part of itself' (2009, p.43). Nara is a marine biologist: she is not expert in but is relatively at ease with the language of ice as at a modern university she would have taken courses on glaciology, paleo-history, and climate science. As Nara takes her first flight and gets her first view of the continent from above, she observes:

The plane's shadow flickered across the ice sheet below, projected by the white sun. The plane flew over muscles of ice driven by a vital current. The ice sheet undulated with these ice streams, high-velocity frozen rivers forced by friction melt from the ice cap into the sea. (2009, p.38)

The terminology here is not as specific as that a glaciologist would use in interior elocution; Nara does not think in *terranes, ablation, basal melting*. However much I personally gravitated toward the muscular cant of glaciology, I did not want to alienate my reader by presenting language as an obstacle so early in the novel. But I signal that this is a new world where distinct natural rules apply: in Antarctica colour and texture are displaced, defamiliarised:

...the brass sky, the cold zeal of the air. Some brutal censor was looking at her, it had her snared in its gaze. She registered this with a thin, skating alarm. She was not religious, she had never had such thoughts in her life (Ibid.).

The section is focalised in Nara's perspective. It concludes with Luke, her pilot companion, giving her a lesson in the otherworldliness of the continent: "It's like nowhere on earth," he tells her. "In fact, we're not actually on earth, here, that's how

I think about it. It's like outer space. A new planet, a new life." His laugh then was strange and private. She could not see his eyes' (p.39). Soon after, on their journey back to base, Nara reports her vision as they fly over the icescape:

The sun was a burnished white ellipsis in the sky. Fields of snow corrugated with sastrugi appeared beneath them, chromium in the glinting sun, raw mirrors from which they had to avert their eyes. As they rose, open meltpools appeared, then outlet glaciers, streaming toward the Bellingshausen Sea. (2009, p.58)

The speculative veneer of the continent is rendered in adjectives, verbs, and nouns (burnished, chromium, glinting, mirrors) which form a blare—the equivalent of looking directly at the sun for too long. In the ensuing scenes Nara is continually caught short by the language she encounters in her first stay on base: of the term 'dingle' she reflects that it is 'an authentic Antarctic word, it meant clean, and fine—much as it sounded, she supposed—a little bell ringing' (2009, p.39).

Later, she absorbs the specific terminology Luke bandies around with no concern whether Nara understands it or not: 'aft boost, oil press, carb heat, hung start, shutdown. Plane language,' Nara muses (as opposed to *plain* language) (2009, p.41.) She finds herself in an intense situation and tries to ballast herself by learning a language she does not yet understand. Similarly, my fascination with the interface between the specific language of the environment and knowing and being is expressed in *Ice Diaries*. Of 'helping' scientists during a ship-board experiment I write:

I tried to follow their conversations, Max, Emilia, Nils, but they spoke a different language, one of ghosts and stars, of shifting mysteries: *fluid equations, finite difference method or spectral method, flux correction and linearization, transient climate simulations, zonal differences, polar night jets.* (2016, p.86)

The factual fervour of this language enchanted me because it seemed to offer a purchase on the vastly complex, overbearing physical reality of the Antarctic. I explore and dramatise this seduction in all my books. However in *Ice Lovers*, a

gradual deflation of language takes hold as the narrative develops. Over the course of the novel, the emotional impress the Antarctic exerts on Nara's consciousness causes her to experience a dissolution in boundaries: she maintains a self/other distinction vis-à-vis other people, but the frontier between her consciousness and the physical reality of the Antarctic begins to blur in a manner that echoes Mark Cocker's assertion of how nature can remind us we are 'part, not whole' (Cocker, 2015). Nara begins to have visions (based on ones I experienced) which trouble her, but which others on base also admit to:

She began to feel the will of a presence – a disembodied thing, not a person, but not an object, either.... On those winter nights when sleep refused to overtake her she lay with her eyes closed and the white faces foamed out of the darkness of her mind. It was as if they had taken a cold interest in her. (2009, p.215)

Nara understands these images are part of her attempt to orient herself in her increasing isolation on base. But they also carry a grain of the experience of the sublime. Here, as distinct from earlier episodes of encounter with the 'landscape' of the Antarctic, her thoughts are rendered in relatively simple, concrete language. As the novel develops, internal pressures build for Nara, fuelled by the external environment, and the adjectival language which deliberately clashes terminologies and registers recedes.

In incorporating the language of everyday operations and science to ballast the power of the sublime, I resist the appeal of—Brady's term —'rarefied moments' (2013, p.101), in other words moments of exaltation and consciously perceived wonder. The part and the entire entity, self and other, human and natural realm, power and powerlessness, are all charged dualities, even more so when, as in the Antarctic, the buffer zone of 'civilisation' and its protocols of dignity and hierarchy, (never mind safety and rescue) are unavailable. In my novel my narrative strategy and stylistics align to explore the power of unusual language, how it gives my characters traction in a situation where the physical environment is sovereign to an usual degree.

Empiricism and Experience

Memoir is an empirical form. It is dependent upon experience for its generation; it also represents experience. Writing a memoir about Antarctica is inevitably coloured by the many well-known and intimidatingly well-written works of non-fiction from the classic explorer era: *The Worst Journey in the World* by Apsley Cherry-Garrard (1922) and *South* by Ernest Shackleton (1919), to mention only two. Any modern memoir will necessarily sit in conversation with and be judged in their shadow.

These memoirs were of course also accounts of expeditions. Their authors confronted the totalising reality of the Antarctic, moving across and (in the case of crevasse falls) within the Antarctic, they were sometimes consumed by it, their lives cancelled. In writing *Ice Diaries* I was highly aware of the literary genealogy of my subject. I sought to immerse the reader in an environment which I met on very different—safer, more managed—terms, by comparison. I put my energy into finding a way to convey the Antarctic's totality without falling prey to the reductivism Pyne alludes to. My goal was to employ what Auerbach defines as foregrounding mimetics, and what Timothy Morton has subsequently termed 'ambient poetics', as: 'a way of conjuring up a sense of a surrounding atmosphere or world' (Morton, 2007, p.22).

The foregrounding mimetical approach, as defined by Auerbach, has a distinct character: rigid, antique, with a tendency to maximalism—an aesthetic of excess. In *Mimesis*, Auerbach gives a comprehensive definition of this surround-sound narrative strategy as the Homeric style, whose impulse is

to represent phenomena as a fully externalized form, visible and palpable in all their parts, and completely fixed in their spatial and temporal relations. Nor do psychological processes receive any other treatment: here too nothing must remain hidden and unexpressed. (1946, p.6)

This depiction of total rendition and revelation is intellectually compelling but difficult to achieve in practice. I am not certain any context, even that of the reduced canvas of the Antarctic, can be fully rendered in its external form. Writing—whether fiction, poetry, or memoir—requires making judicious choices about what to relate and what to leave out. Curiously, what is not related often conveys itself to the reader in a kind of ghost Daguerreotype in that the lineaments of the unrelated imprint themselves on the consciousness of the reader.

Timothy Morton's work has been applied to a growing canon of new nature writing in recent years. Morton does not draw directly on Auerbach's distinction between foreground and background mimetics, but he nonetheless clarifies the concept, writing that ambient poetics

undermines the normal distinction we make between medium as atmosphere or environment – as a background for "field" – and medium as material thing – something in the foreground. In general, ambient poetics seeks to undermine the normal distinction between background and foreground. (2007, p.38)

In *Ice Diaries*, through the direct address of first person, speaking to a reader, I lay bare my process in attempting to engage with and render the environment, eschewing the normalising authority of the author, who, it is assumed, simply knows what to present and describe. In *Ice Diaries* I once again entwine 'scientific' specificity with 'emotional' uncertainty to try to anchor perception—both mine and the reader's—in an unfamiliar realm. This does sometimes result in over-description, although hopefully such over-writing is not quite the stylistic error that it might present in other contexts. I sought to communicate my disorientation, perplexity, and sometimes rank inability to describe what I saw. Two exemplary passages from *Ice Diaries*, both about light and colour demonstrate my mimetic strategy:

White was a more complex colour than I'd thought: there was the ivory of the old berg, which had been at sea for some time and lost the

bleached phosphorus glare of the ice sheet. Then the transparent albumen of the soaked ice, dusky opal, a pinkish white, the metallic blue-white of an electric current or a lightning strike, a pale, dull jade. The sky was white, too, and streaked with icy clouds. (2016, p.75)

Also:

The light is scrawny yet intense. Even under cloud it is impossible to look at the ice field with the naked eye. This light has nothing in common with the consoling skies of the temperate latitudes. Now it is tungsten, a slow-burning, blue-white phosphorous. It is broadcast from somewhere inside the broading stillness of the ice field. (2016, p.120)

Technically this is over-writing, employing compound adjectives—which I am normally wary of—and wilful comparisons. I confess that the unfamiliarity of the environment provoked an over-reliance on simile otherwise absent in my work:

On the edges of the floes were substances which I would soon learn were called *granite ice*, *diamond ice*, *cloud ice*. They looked like rubble, or porridge — small lumps of ice constructing themselves, metamorphosing from water into steel beams, termite mounds, petrified trees. Their shapes harassed me, demanding comparisons. (2016, p.75)

Precise descriptive techniques do allow the reader to form visual imagery based on what the writer supposes is familiar to them: porridge versus a vast ice field, greygreen in colour, in gruel-like quantities as far as one can see. But behind these foregrounded comparisons lies the diaphanous curtain of the sublime. Early on in my section about the continental Antarctic, after I have finally arrived on the continent after a protracted sea voyage, I write: 'I was trying to hold it at bay, what the Inuit call *ilira* — a mixture of fear and awe' (2016, p.149). (It is revealing that English has no word for such a feeling, which is a correlative for the sublime.) I describe the continent's exact emotional effect:

Many times in the coming months in the Antarctic I would feel a subdued chastening which was not so much despondency as a sobering longing on behalf of the planet. For the first time in my life I was beginning to think of the planet as an organism whose well-being I could affect. I had considered this before, of course, but in the abstract. In the

Antarctic I felt closer to the planet than ever before. It was almost as though I could hear its pulse. (2016, p.171)

These passages from the mid-section of *Ice Diaries* reveal a shuttling between a classic or Burkean sublime, meaning an emphasis on the effect of the actuality of the place, and my growing sense of phantasmal uncanniness generated by nature. 'Nature hovers over things like a ghost,' Morton writes, 'it slides over the infinite list of things that evoke it' (2007, p.14). But this 'ghost' is made palpably present through the efforts of the writer. Morton argues that 'Environmental writing is a way of registering the feeling of being surrounded by ... an otherness, something that is not the self' (2007, p.17). The otherness/immanence/uncanniness Morton alludes to has a scientific rationale. The visitor to the continent attached to a scientific organisation is constantly aware of evidence of the accelerator effect of climate change at the poles: 'the peninsula is the fastest-warming landmass in the world; at 2.5 degrees Celsius each year, it is heating up at approximately six times the global average rate' (2016, p.xi). The Antarctic is also the locus of the largest magnetic anomalies on the planet, wherein an unknown force from beneath the ice sheet broadcasts a magnetic field that can disrupt compasses and navigation systems (British Antarctic Survey, 2018).

This fusion of the strange and the factual is embodied in the concept of the empirical sublime. All realms I explore in my work —the scientific-observational-factual-experiential—are mustering a new conception of the sublime, a sublime that acknowledges the immense dimensions of climate change. In the case of *Ice Diaries*, I knew from the outset that the book would have a firmer focus on global warming than my poetry or novel. In order to communicate the vastness of the subject, through use of diction, syntax and metaphor I present the factual and experiential and the scientific and personal, which is to say the emotional, as an equivalence. In my introduction (written last, after the rest of the book was finished) I write:

This book dramatizes what many readers may think of as science, but actually the science — information, observation — is indivisible in my

mind from what actually happened, and what I felt. They are a single entity, like water, or even ice. (2016, p.xiv)

Ice is of course water in frozen form. My stated belief in the similar material unity between emotion and experience had to be encoded in my aesthetic strategy. However, the conflating of realms often assigned to different aesthetic and lyrical charges (everyday = mundane; extraordinary = transcendent) is not new. In the analysis of the Homeric mimetical mode compared with the Biblical mode, Auerbach posits that in the Bible *everything* is sublime:

... the sublime influence of God here reaches so deeply into the everyday that the two realms of the sublime and the everyday are not only actually unseparated but basically inseparable. (1946, p.23)

What is perhaps specific to our present historical moment is the link between the urgency for observation of everyday phenomena in the polar regions (melting, seaice change, food web alterations, ocean acidification and warming, atmospheric changes) and our growing awareness of the power climate change exerts over our collective future as a species. Climate change functions as a meta-narrative. It is a confluence of forces, a consequence of human activities colliding with the flexible but ultimately finite realities of the planet's climate system. This is now well-established in the scientific record as much as in the cultural imaginary (Cook et al., 2013).

However the speed of change is accelerating. The fusion of everyday evidence of change, the rote mundanity required for reliable data-observation in science, and a sense of an unfolding species emergency is what we are experiencing, which we have encoded in the term Anthropocene. For object-oriented ontologists, of which Timothy Morton is a leading contemporary example, climate change is

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⁹ The term was first coined by atmospheric chemist and Nobel laureate Paul Crutzen in 2000 and has become increasingly widely accepted as a notation of the Holocene in which man's effects have superceded nature's in Earth's epochal change.

¹⁰ Object-oriented ontology (OOO) is derived from Heideggerean thinking and rejects the notion of the supremacy of the human-oriented world over that of the rest of life, as way to assess reality. It considers that non-human things may experience existence in a way that our human-centric

only one of a suite of phenomena that have been sidelined by the post-Enlightenment obsession with the reification of the human. Climate change (Morton declines to call it climate change, rather he uses the term 'global warming') is so over-arching that it enters into a new category of things. Morton has described these as hyperobjects (2013), 'entities of such vast temporal and spatial dimensions that they defeat traditional ideas about what a thing is in the first place ... They are things, but they cannot be experienced' (2013, p.3). He goes on to explain: 'On the terrain of media and the socio-political realm, the phrase climate change has been such a failure that one is tempted to see the term itself as a kind of denial, a reaction to the radical trauma of unprecedented global warming.' (2013, p.8).

As a word, hyperobject has the technological tang of the now. But it may actually harken back to a classic Burkean sublime. Morton states that the defining characteristic of the Burkean sublime is that Burke 'considers substance as the stuff of nature ... This "substantialism" asserts that there is at least one actually existing thing that embodies a sublime quality (vastness, terror, magnificence)' (2007, p.16). Writing about the natural world has largely taken on board the Burkean sublime, Morton adds: 'On the whole, nature writing, and its precursors and family members, mostly in phenomenological and/or Romantic writing, has tended to favour a substantialist view of nature — it is palpable and *there*...' (Morton, 2007, p.16). In a manner that rings true to my basic approach in *Ice Diaries*, for Morton, 'environmental writing is a way of registering the feeling of being surrounded by ... an otherness, something that is not the self' (2007, p.17).

In particular, amongst my books on Antarctica, *Ice Diaries* conforms to a substantialist view. As I have argued, my language and representational strategies reflect an inner, ontological conflict about the role and nature of the self when faced with the *thereness* (Morton, 2007) of the Antarctic, which presents itself as a vast

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consciousness cannot apprehend. Any 'thing' can be an object, which may have an experience, existence, and validity we humans have not considered. Morton expands OOO to posit the existence of 'hyperobjects': 'things' which are huge, overarching, overbearing, too complex for people to understand, but which define our existence.

object of scientific study. *Ice Diaries* 'extended sections on climate change science are soldered to accounts of the everyday work of science and frank accounts of my own internal state. My fellowship to the Antarctic was a crash course in climate science, which, while thrilling and satisfying, also required me to jolt myself out of my writerly inner reverie, an imaginative play-space I habitually retreat to when writing, something of an altered state, and pay attention to 'reality':

I was learning more in a matter of weeks than I had in entire years. I was relieved to have been released from the narrow concerns of the day-to-day. I was no longer an observer in a global drama but a participant. I considered the paradox of our geographical position. In the Antarctic we were beyond the human, temporarily protected from it. The Antarctic is changing, and will change, but it is out of the equation for experiencing the human effects of climate change, because it has never sustained human life. The disruptions and mass suicides foreseen by climate apocalypticians will never take place there. We were at the epicentre of the crisis, yet simultaneously safe. (2016, p.171)

To return to Morton's theory, hyperobject could be another word for the sublime. Things which are too large to perceive and yet are real, which are diaphanous and vast and haunting and intimidating, but which also possess a kind of divine beauty – both fit the description. As Brady argues, the sublime has more recently been conceived of as an aesthetic quality, an emotional state or experience (2013), but it may also be becoming something more expansive: a metaphor for transcendence—particularly a transcendent state achieved by dint of art and nature.

Importantly, Brady conceives of the empirical sublime as a subset of the environmental sublime. In this mode, nature is foregrounded over the human perceiving consciousness. It is 'environmental' because it places an implicit emphasis and value on natural spaces (2013, p.113). In the empirical sublime, the *thereness* of the natural space or force is the focus.

The empirical sublime can be conceived a recent iteration, influenced by the reality of climate change, of a durable concept which has flexed with time to respond to changing notions of the self, the divine and nature. My work shows how the root

of the empirical sublime is the calling upon, in aesthetic terms, of everyday experiences, the language of science, that of operations and logistics, to enhance our understanding of the world. Such a conception is not that distant from classic conceptions of the Romantic sublime, as put forth by Brady, which were influenced by scientific developments of the day: 'New developments in sciences such as geology also brought a concrete, material foundation of landscape aesthetics to many discussions of the sublime in literature.' (2013, p.100).

Thus an echo of the sublime exists within the record of the everyday gathering and analysis that are part of the scientific method, or yet another face of it: a dutiful focus, an intense concentration on the phenomena of the natural world and how it can be measured, which is to say described. This leads to a valuing of nature, repurposing the critique ecocriticism makes of the sublime: that '[it] expresses a human-centred engagement with nature, where the evocation of self-reflection and the sense of human freedom come at the expense of backgrounding nature' (2013, pp.101–102). As Brady notes, for Kant, the imagination mediates between subject and natural object (2013, p.105). My rendering of the contemporary Antarctic as expressed in my novel *The Ice Lovers* in particular leans on language as an orienting mechanism in a disorienting physical space. At the same time, in my poetry and memoir, a deliberate fusion of 'data' with imaginative language is itself an expression of the yearning for transcendence encoded in the sublime. The extreme version of the sublime experience of the southern continent is expressed in my portrait of subjects unified with an unknowable natural object, in the form of Antarctica.

Conclusion: The Empir(e)ical Sublime

As Francis Spufford outlines in his introduction to an anthology of writing about the Antarctic, 'the early explorers were engaged, in Antarctica, in a kind of romantic

imperialism.' (2013, p.7). As Spufford writes, the prize of the heroic era was not only the lecture tours, newspaper profiles and patronage by monarchs. There was also a 'suitably abstract prize, for victory: you struggled through the Antarctic's defences, and the unknown become known' (Ibid.).

This quest for knowledge underpinned the romantic spirit of the explorer era as much as its reckless adventurism and nationalist follies. In Antarctica, this complex and to an extent discredited nexus of impulses has latterly been reinvented and subsumed into science, replaced by the calm strings of data, the tenacious, methodical record-keeping that both science and health and safety regimes require in the contemporary Antarctic. But even as the politics and suicide missions of the polar imperial age have been questioned, there is no denying that the era produced brilliant literature. It has yet to be determined whether the contemporary canon of imaginative literature on the Antarctic, including anything I have written, measures up to the stylistic bravura and sheer grit of those narratives.

In the one century in which it has existed as a verifiable place the Antarctic's overarching function has morphed from one of Empire to the Empirical, through the vehicle of science. As I have explored here, a fundamental meaning of 'empirical' is something based on experience. Yet the Antarctic presents a conundrum that is close to the core meaning of the sublime. In *Ice Diaries* I quote Thomas Keneally, who also journeyed to the continent to write a book. He observed that the Antarctic is 'not so much a physical place as "another state of being" (2016, p.xii). The Antarctic is both place and space, fact and metaphor, a conceptual flexibility that mirrors a similar pliability in the notion of the sublime, which, as I have outlined in this essay, has been rendered by various thinkers as both an actuality and an abstraction.

In positing 'a new, environmental, sublime' Emily Brady alighted on the concept of the empirical sublime, an iteration of her reading of Kant's dynamic sublime (2013, p.7). My own understanding of this term, which as I have explained was arrived at independently, before I had read Brady's work, was a descriptor for the enlightenment I found in 'scientific' language as a writer, through my work in

Antarctica. I took the new lexicon I learned in the Antarctic and the task of dataobservation to heart, and employed the language of science in my poetry, fiction, and non-fiction set in, or inspired by, the continent. Astonishment, uncertainty, and unfamiliarity encouraged me to pinion my language to fact in a way that is encoded in the diction, syntax, word choice, and cadences of my work.

As Brady argues, the sublime is an evolving concept. Clearly like all ideas the sublime is historically and culturally inflected. My approach to the sublime in my published works of imaginative literature on Antarctica concord with its reconception by philosophers such as Emily Brady and Timothy Morton in the light of the environmental emergency of global warming, and around which science has mustered its energies. The character of this evolving, climate change-influenced conception of the sublime is, as Brady's work suggests, balanced in favour of nature, rather than the importance of the human experience of the sublime:

the admiration we feel in the sublime, as well as a perspectival shift of self, can feed into new forms of self-knowledge and potentially ground respect for nature, not in spite of, but very much because of nature's irresistible scale and power. (2013, p.8)

Climate change may be the future of the sublime: a process so vast and powerful it awes and terrifies us in the here and now, as well as in the abstract. Meanwhile writing about the Antarctic has become synonymous with writing about climate change. A triangular equivalence can be posited between the Antarctic, climate change, and the sublime. The language of the empirical sublime is an expression of this new and secular trinity. The continent is the preserve of science, and 'science' in all its forms has found a renewed charge and dedicated purpose in establishing the veracity and likely future effects of climate change. However, as American nature writer Bill Adams has observed, 'science does not make meanings: people do' (2003, p.95). Similarly, fiction and memoir in particular are a gregarious, peopled form. The writer has to find a language to convey the special reality of the comparatively de-peopled Antarctic via human emotion and human subjectivity.

Climate change, embodied by the Antarctic, is an expression of the perspectival, not merely aesthetic, shift described by Brady, in favour of the power of nature to awe, inspire, terrify, and motivate human consciousness. My work's contribution has been to explore the evolving dimensions and character of the sublime as it is experienced and expressed in Antarctic literature, by employing a narrative and linguistic strategy which fuses the experiential/empirical with the emotional/subjective, as an embodiment and expression of the character of twenty-first century Antarctica. Scientific endeavour usually involves keeping a record, as I have outlined in this essay, and in the act of record-keeping a recording is made, a textual and textural word-and sound-scape of a wilderness most human beings will never see. Antarctic literature may have a narrow history, but in its scant echo chamber its voices resonate deeply, to create a recording all the more sonorous for being mastered in silence.

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APPENDIX

Published works by Jean McNeil

From the Library of Graham Greene (1993), Rampant Lions Press, Cambridge, UK The Rough Guide to Costa Rica (1994), Rough Guides, London, UK

The Rough Guide to Central America (Costa Rica and Nicaragua) (1996), Rough Guides, London, UK

Hunting Down Home (1996), Phoenix House, London, UK; Milkweed Editions (1999), Minnesota, USA

Nights in a Foreign Country (2001), Phoenix House, London, UK

Private View (2003), Weidenfeld & Nicolson, London, UK

The Interpreter of Silences (2006), McArthur & Co, Toronto, Canada

The Ice Diaries: Antarctic Work-in-Progress (2006), Arts Council England, London, UK

The Ice Lovers (2009), McArthur & Co, Toronto, Canada

Night Orders: Poems from Antarctica and the Arctic (2011), Smith/Doorstep books, Sheffield, UK

Ice Diaries: An Antarctic Memoir (2016), ECW Press, Toronto, Canada; (2018) ECW, London, UK

The Dhow House (2016), Legend Press, London, UK; (2017) ECW Press, Toronto, Canada

Fire on the Mountain (2018), Legend Press, London, UK

Day for Night: Landscapes of Walter Benjamin, ed. (2018), Benjamin Editions, London, UK

Selected critical reception of works cited by the author –reverse chronological order

For *Ice Diaries* (2016; 2018)

- Winner: 2016 Adventure Travel Award and Grand Prize, Banff Mountain Film and Book Festival, Banff, Canada
- Chosen by The *Observer* and The *Guardian* as one of the best Nature books of 2018.
- Featured on CBC Radio's The Next Chapter, BBC Radio 3's Free Thinking, BBC World Service The Arts Hour, BBC Radio 5's Up All Night, 2016-2019.

'Stunningly written... should be on the shelf of anyone fascinated by the globe's final geographic and psychic frontier.'

New York Times Book Review

'McNeil's gripping book is a vivid depiction of the human community in the "granite quarry-crossed-with-a-penal-colony" of a polar base camp. This sci-fi landscape is suffused with menace and foreboding but so, McNeil remembers, is home.'

The Guardian

'Stunning... McNeil's first-person narrative of her experience wholly absorbs.'

Maclean's magazine

'Ice Diaries artfully conveys both the magical allure and the deadly hauteur of this icy world that few of us will ever see.'

Toronto Star

'Rigorously self-critical and intelligent, Ice Diaries somehow combines an exclusive tour of climatology's biggest open-air laboratory with a personal journey that's grounded in raw, authentic vulnerability.'

Winnipeg Free Press

'A discussion of the Antarctic as a physical landscape – its impact on the imagination – and an exploration of one person's inner world.'

Chicago Tribune

'A welcome literary-minded addition to a category of books dominated by male explorers.'

Metro

For Night Orders (2011)

'Magnificent...Part diary and part scientific journal, the book is a breath-taking study of the dynamics and the poetry of ice, a book about the senses and the imagination, about the planet and our own small place on it.'

Morning Star

'Compelling and spacious... McNeil, a novelist, has a powerful gift for phrases and an ear as fine as an eye for language.'

Poetry Review

For The Ice Lovers (2009)

'An accomplished novel...McNeil has a sure hand and a deft touch with prose. Like the ice of its subject, the writing in the novel hides great complexities with surface simplicity and clarity.'

The Globe and Mail

'An enraptured, almost lovelorn, account of Antarctica.'

Polar Review