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### Full Length Article

# Borderscape Antarctica: The uncanny geographical imaginaries of *Terra Australis Incognita*

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#### ABSTRACT

The harsh beauty of the Antarctic continent has always fascinated explorers, scientists, policymakers, and global audiences alike. From the 18th century onwards, national expeditions competed to discover and claim *Terra Australis Incognita*, the fantastical Great Southern Land believed to be located in the southern Asia-Pacific. This article investigates the worldmaking potential of Antarctica as an uncanny borderscape where humans confront the familiar yet otherworldly ice. I argue this encounter produces a double-sided imaginary of Antarctica as a geography of exception – both as a utopian world elevated above the everyday politics that dominates international relations elsewhere and as a dystopian world where monsters and madness lurk just beneath the icy surface. This double-sided imaginary enabled diplomatic agreement at the 1959 Washington Conference that froze competing sovereignty claims and preserved Antarctica as a place of horror where alien forces threaten to overwhelm human rationality. Drawing on primary accounts of exploration, archival material, and science and speculative fiction, my intertextual analysis demonstrates how this imaginary was created, represented, and reproduced to create utopian and dystopian visions of our collective planetary future.

#### 1. Introduction

Following Ancient Greek and Roman geographers, early modern maps of the world hypothesized the existence of *Terra Australis Incognita*, the Great Southern Land believed to be located in the southern Asia-Pacific. Speculation that the landmass could be rich in economic potential drove European imperial ambitions to find and conquer it. Even after it was confirmed that this southern land was actually two continents – Australia and Antarctica – and the latter could not support selfsustaining human habitation, its fantastical possibilities continued to haunt the Western geographical imagination. In this article, I explore the worldmaking potential of Antarctica as an uncanny borderscape where traditional territorial competition confronts the frozen continent as an ambiguous space between the human and nonhuman.

At first glance, Antarctica is a strange place to think about borders. Its vast whiteness and isolation evoke uniformity rather than differentiation, and the absence of permanent human communities seem to rebuff inside-outside distinctions in a geography where everyone is a visitor and foreigner. At most, Antarctica represents a place of imperial border-making practices that mirror those in other supposedly empty spaces on the map where land- and prestige-hungry empires competed with each other in the 19th and early-20th centuries (Dodds, 2006; Howkins, 2017; Yao, 2021). However, if we conceptualize borders not just as literal lines separating states or defined communities but expand the definition to encompass places of liminality and fluidity under the borderscape literature (Rajaram and Grundy-Warr, 2007; dell'Agnese & Amilhat Szary, 2015; Rothmüller, 2021), then the emptiness of the ice and its shapeshifting abilities make Antarctica a fertile place to consider bordering, unbordering, and the worlds they produce.

This article pushes borderscape literature to conceptualize bordering and unbordering as more than solely human processes. It does so by focusing on the concept of uncanny borderscape as a framework of analysis that allows us to theorize borderscapes as liminal spaces of encounter between the human and nonhuman that enables the creation of utopian and dystopian imaginaries of the future. I demonstrate the concept's potential by focusing on Antarctica as such a fluid and uncanny borderscape.

To begin, I develop the concept of uncanny borderscapes and how Antarctica as an uncanny borderscape facilitates the encounter between human and nonhuman worlds. I then examine how explorer-scientists'

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confrontation with the uncanny ice produced imaginaries of Antarctica as a geography of exception – at once earthbound and otherworldly. This imaginary not only shapes our collective understanding of Antarctica as a pure and pristine place, but also informed diplomatic discussions at the 1959 Washington Conference and enabled the creation of international governance over the southern continent. Hence, ice as a utopian place of exception facilitated the creation of a politics of exception in Antarctica underpinned by scientific collaboration.

However, while imaginaries of Antarctica as a place of science and not everyday politics challenged traditional territorial borders, these imaginaries also reinforced different borders between the scientistprotagonist of Antarctic exploration and the ice whose mysteries they hoped to uncover and conquer. The second half of this article explores the creation and representation of human-nonhuman borders in Antarctica, particularly through science and speculative fiction that center on the thawing ice and the monsters that might emerge. Here, the ice reveals deep anxieties lurking in our imaginaries of Antarctica and the physical, political, and metaphorical battlelines that must be defended to prevent a dystopian future. Antarctica as an uncanny borderscape alerts us to how different borders and bordering practices intersect and co-constitute one another and how worlds created at their conjuncture inform our understanding of our relationship with each other and the nonhuman other.

To investigate Antarctica as a multifaceted and generative space of encounter between the human and nonhuman requires intertextual analysis, and I draw on expedition reports, memoirs, official government documents, and science and speculative fiction to show how imaginaries of Antarctica were constructed, represented, and reproduced. I use firsthand accounts and memoirs to show how early explorers tried to make sense of their encounter with the ice by portraying Antarctica as a geography of exception. Then, I draw on primary source archival material to show how these imaginaries of Antarctica as dark, distant, and exceptional informed diplomatic negotiations over the 1959 Antarctic Treaty System. In addition, I explore science and speculative fiction to distil Antarctica's symbolic meaning as a liminal space between the human and the alien. Moving between these diverse representations of Antarctica allows me to trace how the encounter between humans and the ice created imaginaries of Antarctica that produced utopian and dystopian visions of our planetary future.

#### 2. Uncanny borderscape on the ice

The uncanny borderscapes as a liminal space of engagement between the human and nonhuman expands the traditional idea of borders to encompass an imaginative dimension beyond the literal border itself. As Rajaram and Grundy-Warr emphasize in the introduction to their edited volume on the concept, the borderscape is not "contained in a specific space" or "in a physical location" (2007, p. xxviii). Instead, unmoored from static physical spaces, the borderscape is akin to an "ongoing encounter" that is "always in process" (Rajaram and Grundy-Warr, 2007, p. xxx). Thus, borderscapes take on a "processual ontology" (Brambilla, 2015, p. 26) that conceptualizes reality as always evolving and in the process of becoming. Gloria Anzaldúa uses the term 'Borderlands' with a capital 'B' - to differentiate from the literal borderlands with a lower case 'b' - to denote a metaphorical and emotional space "that can be found anywhere where there's different kinds of people coming together and occupying the same space" (quoted in Keating, 2009, pp. 91-2). Like borderscapes, Anzaldúa's Borderlands is a metaphor that rejects the static certainty of the linear border - instead, it is a "vague and undetermined place ... in a constant state of transition" (quoted in Keating, 2009, p. 91). While her work is situated along the US-Mexico border, her focus is on the psychological, sexual, and spiritual Borderlands that are created when different groups collide. Hence, the borderscape and Borderlands literature emphasizes the contingent, fluid, and imaginative nature of bordersites as generative social spaces.

borderscape and Borderlands as conceptual frames envision the border as a place of encounter between identities and foreground the worldmaking possibilities that reside in liminal spaces (Mezzadra & Neilson, 2013; Rothmüller, 2021). For Rajaram and Grundy-Warr, the borderscape is a site of identity politics, particularly in "struggles to clarify inclusion from exclusion" (2007, p. xxviii). For Anzaldúa, the Borderlands is where worlds collide - what she calls the "interface" between different worlds and cultures (Keating, 2009, p. 92). Examining worldmaking shines a light on the intellectual scaffolding that sustains current understandings of the world. For example, Cheah (2016) examines how modern conceptualizations of time enables our understanding of global space, and Bell (2013) highlights how the study of global intellectual history is "an act of imagination" that helps constitute what is global. However, focusing on the collision of worlds at borderscapes also alerts us to another important function of worldmaking - its productive potential in challenging existing worlding logics and creating alternatives. For example, Getachew (2019) shows how anti-colonial worldmaking in the mid-20th century precipitated a reimagining of world order, and Cheah (2016) and Carabelli (2018) show how literature and art might intervene to help us imagine beyond dominant worlds. Hence, investigating worldmaking at borderscapes reveals both how existing representations constituted the worlds we inhabit and how imaginaries might help us envision other possibilities.

However, much of the literature on borderscapes and their worldmaking possibilities focuses on human communities with few explicit theorizations of nonhumans and more-than-humans in the production of borderscapes (for exceptions, see Barla & Hubatschke, 2017; du Plessis, 2018; Fleischmann, 2023). At most, borderscapes literature follows Derrida in using nonhumans as metaphor. It draws linkages between the virus and the 'foreigner' who must be kept out to maintain a 'healthy' society (Rothmüller, 2021, p. 2; Ticktin, 2017), particularly since Covid-19 has reminded us how viruses invigorate traditional bordering practices (Aradau & Tazzioli, 2021; De Genova, 2022). But beyond being merely a metaphor, the virus as imagined other and material reality plays a constitutive role in bordering processes. On a curious Austrian proposal to employ asylum seekers to clear invasive species from the countryside, Barla and Hubatschke (2017, p. 401) observe that "refugees as well as invasive species are mutually hailed into being as the other, the foreign, the alien, and the invader, that has to be eradicated, shipped back to their country of origin". Du Plessis (2018) explores how microbes actively 'territorialize spaces' and engage in bordering practices related to but not necessarily dependent on human practices and meaning making. By expanding borderscapes to encompass the encounter between human and nonhuman worlds, I seek to broaden conceptualizations of borderscape and Borderlands beyond their implicit anthropocentric framings. This allows us to theorize bordering as processes that always involve nonhuman and more-than-human forces as active agents.

To do so, I examine how borderscapes create a sense of the uncanny that has worldmaking possibilities. Literary scholarship has explored the concept of the uncanny as a notion that helps unsettle 'naturalized' boundaries between the human and nonhuman. Nicholas Royle defines the uncanny as a "commingling of the familiar and the unfamiliar" that causes a "crisis of the natural touching upon everything that one might have thought was 'part of nature': one's own nature, human nature, the nature of reality and the world". Hence, Royle suggests that one of the functions of the uncanny "has to do with a strangeness of framing and borders, an experience of liminality" in that it disrupts our accepted notions of "what is inside and what is outside" (2003, p. 2). In other words, the uncanny challenges the accepted border between the human self and the nonhuman other by questioning what is 'natural' and what is not. For example, the uncanniness of Dracula rests in his ability to undo multiple borders - the corporeal border between human and nonhuman, the temporal border between mortality and immorality, and the geopolitical border between a civilized Britian and a barbarian 'East'. Hence, the power of the uncanny to unsettle borders emerges through its

ability to be both recognizable yet strange, familiar yet alien (Kirby, 2020; Kristeva, 1988). The uncanny borderscape, then, is a site where one is confronted with the familiar self intertwined with the alien other – both a 'site of terror" and also a generative space where "a new, hybrid identity" might emerge (Nyman, 2022, p. 8). By instigating a crisis of the natural, the uncanny borderscape disturbs accepted boundaries to reveal and create worlds, both monstrous and sublime.

#### 2.1. Imagining icy border worlds

The worldmaking potential of borderscapes as an uncanny zone of human-nonhuman encounter manifests itself through geographical imaginaries. Geographical imaginaries, as Derek Gregory explains, are "taken-for-granted spatial orderings of the world" that allows us to understand our geographical situatedness (2009, p. 282; also see Prince, 1962; Yao, 2022a; Yao, 2022b). Imaginaries can be plural, overlapping, and even contradictory - for example, imaginaries of England both place it within Europe and outside of it. They can have enduring effects. For example, Uma Kothari and Jorden Wilkinson show how colonial imaginaries of tropical islands as sites of "escape, adventure, power, control and philanthropy" continues to shape how the international community view these geographies (2011, p. 1397). For the discipline of geography, Howie and Lewis argue that geographical imaginaries help challenge the "unhelpful boundary lines" between the material and imagined while also highlighting the "productive potential in cultural constructions of place" (2014, p. 132). Hence, geographical imaginaries of Antarctica bring together the interplay of material ice and the cultural attachment of meaning to ice to constitute Antarctica as an uncanny borderscape.

Doing so follows scholarship in geography that rejects Euclidean assumptions about space as "unwelcome constraints that separate spaces from the matter and meanings that occur within" (Steinberg & Peters, 2015, p. 248; also see Peters, Steinberg, and Stratford, 2018; Wang, 2023). Rather than conceptualizing space as fixed and abstract territory, this scholarship proposes a volumetric approach that not only extends space vertically, but rethinks space as "open, immanent, and every-becoming" (Steinberg & Peters, 2015, p. 247). This framing parallels borderscapes literature that envisioned liminal spaces as sites of lively and fluid interaction between humans and nonhumans. In Antarctica, human engagement with ice is suspended in tension between freezing and thawing. To wrestle with the ice is to freeze, and much of the money, equipment, and preparation on Antarctic expeditions is spent on preventing the human body from freezing. But gliding across the ice is also to thaw - the contact pressure between the human body and ice produces frictional heat that facilitates slipperiness. Thus, the perpetually changing ice, which creates the possibilities of human engagement with it, subverts conceptualizations of nature as an inert background to human activities. Instead, accounts of journeys in Antarctica are full of descriptions of the dynamic ice, which together with its human interlocutors, create geographical imaginaries of Antarctica as a cold, uncanny, exceptional space.

Investigating Antarctica as an uncanny borderscape of exception also contributes to political geography scholarship that focuses on the polar regions as sites of geopolitical competition and meaning making (for example, Dodds, 2002, 2006; Dodds and Nuttall, 2016), particularly through the conduct of science (Powell, 2007; Lajus & Sörlin, 2014). Antarctica differs from the Arctic in that no indigenous populations call it home, so that, as Adrian Howkins aptly observes, conquest of Antarctica had "the glory of empire without the messy reality of ruling a colonized people" (2017:, p. 43). The same might be said for science -Antarctica offers the glory of science without the messy reality of interacting with indigenous knowledges. Therefore, I contend that science as a mediator between the human and the ice did more than just motivate and justify Antarctic exploration. It acted as a constitutive force that shaped our collective imaginaries of Antarctica and what it means. Here, I draw on Yi-Fu Tuan's insights on the importance of affective attachment to place, as well as cultural scholars such as Elena

Glasberg (2008) and Lisa Bloom (2022) whose work reveal how science is a constitutive force in Antarctica. As Glasberg writes, "science is government in Antarctica: it is the reason d'être, alibi, material condition, governance structure, and epistemology" (Glasberg, 2008, p. 648).

In what follows, I use freezing and thawing as a frame for imagining Antarctica as an uncanny borderscape where human and nonhuman worlds collide to create both utopian and dystopian planetary futures. First, I demonstrate how representations of the ice as pure, otherworldly, and dangerously beautiful translate into imaginaries of Antarctica as a utopian geography of exception capable of freezing the contentious everyday politics that dictate international relations elsewhere. Hence, the encounter between humans and the ice helps transform Antarctica from a place of territorial contestation into a collaborative scientific laboratory. Second, while utopian worldmaking on the frozen ice disrupts traditional borders and creates a geography of exception, the fear of thawing leads to the reinforcement of a different border between human and nonhuman worlds. Physically, politically, and metaphorically, a thawed Antarctica engenders a dystopian future where the human self becomes consumed by the alien other and loses itself in madness - a world that must be avoided by hardening the humannonhuman border and keeping Antarctica frozen. Finally, I reinterpret thawing by reframing the blurred boundaries between humans and the ice not as a borderscape filled with alien horrors, but as a generative space of liminality that offers other imaginaries of how human and nonhuman worlds might coexist in solidarity.

# 3. Antarctica as a geography of exception: undoing territorial boundaries

During the first centuries of exploration, national expeditions competed to be the first to find and claim Antarctica. Before his voyage to the Pacific in 1768, Captain James Cook received secret instructions from the British Admiralty ordering him to discover the Terra Australis Incognita and claim it for Britian. Cook failed but instead claimed Australia and New Zealand for the British crown. Thus, even before its official 'discovery', the imagined Antarctica was actively shaping global politics. In 1772, Cook embarked on a second attempt where he and his men became the first Europeans to cross the Antarctic Circle, but icy conditions forced him back without sighting land. However, Cook's description of the southern Pacific's rich marine resources inspired whalers and sealers to flock there in subsequent decades (Day, 2013, pp. 10-20). The first documented explorer to see Antarctica was Russian Fabian Gottleib von Bellingshausen who just beat British and American sailors to the prize. Following in the footsteps of explorers elsewhere, Bellingshausen claimed the new land for Russia, naming what he saw Peter I Island and Alexander I Land in hopes that they would become "indestructible monuments" to "commemorate the name of our Emperors to the remotest posterity" (quoted in Day, 2013, p. 49). While other empires at the time did not recognize these claims and even questioned the veracity of Bellingshausen's reports, in the 1950s, the Soviet Union insisted that due to Bellingshausen's centrality to Antarctic exploration, the USSR had legitimate interests in Antarctica and must be included in any future agreement.

By the mid-19th century, it was clear that rather than a lush continent, *Terra Australis Incognita* is covered in ice, but nevertheless, three national expeditions raced to claim the empty continent: Dumont D'Urville for France, James Ross for Great Britian, and Charles Wilkes for the United States (Wood, 2020). The three explorers left marks on our imaginary of Antarctica including Wilkes Land, the volcanoes Mount Erebus and Terror named after Ross's ships, and the much-beloved Adélie penguins named after D'Urville's long suffering wife. National competition continued into the 20th century with the 'heroic' age of exploration through flag-planting and proclamations of sovereignty. By the 1940s, seven states – France, Britain, Australia, New Zealand, Norway, Chile, and Argentina – had made formal claims that carved up Antarctica. Until the mid-20th century, explorers' bodies, practices, and representations produced Antarctica as a geography of national competition where linear and abstract borders were drawn in the ice. When a tearyeyed Roald Amundsen planted the Norwegian flag in the south pole on 14 December 1911, he reinforced Norway's Antarctic claims, just as Robert Falcon Scott and his men's frozen bodies helped legitimate British claims. However, at the height of the Cold War, Antarctica transformed from a site of territorial competition into a 'frozen laboratory' through a multilateral compromise that froze territorial claims. In the following sections, I argue that this transformation rests on Antarctica as an uncanny borderscape of encounter between scientistexplorers and the ice – an encounter that created the framing of Antarctica as a geography of exception and enabled diplomats at the Washington Conference to negotiate a freezing of territorial sovereignty.

#### 3.1. Creating a geography of exception

Imaginaries of Antarctica as an uncanny borderscape of exception often begin with the physical qualities of the ice and how its hostile barrenness makes Antarctica unlike anywhere else on earth. As ethnographer Jessica O'Reilly notes, Antarctic exceptionalism stems from its place as "the highest, windiest, driest, and coldest continent" (2017, p. 16). For this reason, Antarctica attracts scientists and explorers as the last piece in the planetary puzzle. However, Antarctica's exceptionalism runs deeper than its physical characteristics. For Stephen Pyne, the white emptiness of the ice casts a reflection on those who approach it as it strips "civilization (and exploration) to its most elemental forms" (1986, p. 66). It turns the predictable scripts of geographic discovery on its head. Elsewhere, empty spaces on the map are 'filled' as explorers acquire knowledge about the environment and societies they encounter. But exploration in Antarctica turned a richly imagined Terra Australis Incognita alive with possibilities into a white emptiness on the map, which becomes an "imperfect mirror that reflected back the character of the person and civilization that gazed upon it" (Pyne, 1986, p. 67). In this way, Antarctica represents an icy mirror turned inwards as a test of character for individuals and nations who venture there.

Many explorers framed Antarctica's exceptionalism as the continent's unreal or unearthly characteristics. For example, in his memoirs *South*, British explorer Ernst Shackleton describes the experience of being stuck in ice as "drifting helplessly in a strange world of unreality" (1998[1919], p. 43). Australian Louis Bernacchi, who joined the British *Southern Cross* Expedition, writes in his account of the voyage that "one is mentally struck with the similarity between the moon and that part of the globe [Antarctica]; a dead silent world above you, and a dead silent world at your feet" (1901, p. 139). Hence, early explorers' encounter with the ice produced an experience of being both earthbound and somehow in an alien space. This uncanniness led to explorers' envisioning of Antarctica as both a dystopian place of horror and a utopian place of purity elevated above the everyday mundane.

The encounter between humans and the ice is full of dangers, and early explorers' accounts often describe Antarctica as a place of uneasiness and horror. The 1910-12 Japanese Antarctic Expedition's official report compared the terrifying experience of sailing through the ice pack with having "a ferocious tiger at the front and a vicious wolf at the back, one peril was followed by another in quick succession" (quoted in Turney, 2012, pp. 159-60). Frederick Cook served aboard the Belgica, the first expedition of the 'heroic' age and first to accidently overwinter in Antarctica when the ship became stuck in the ice. In his memoirs, Cook describes the scene: "the curtains of blackness which has fallen over the outer world of icy desolation has also descended upon the inner world of our souls ... I can think of nothing more disheartening, more destructive to human energy, than this dense, unbroken blackness of the long polar night" (quoted in Griffith, 2007, p. 163). Louis Bernacchi also describes the terror of being surrounded by nothing but ice and snow: "above, a sinister sky; below the sombre sea; and over all the silence of the sepulchre" (1901, p. 78).

However, alongside the horror, early explorers also depicted Antarctica as sublimely beautiful in its purity. Archibald McLean, a member of the 1911-14 Australasian expedition, writes: "the indescribable sunset colours in the primal purity, the pure, resplendent snow and our great, gaunt ship reflected velvet brown in the brightly tinted sea ... surely it is Perfection portrayed - Truth defined in rigidity of outline, simplicity of colour, in an atmosphere clear and uncontaminated" (quoted in Hains, 2002, p. 54). The Japanese expedition report echoes McLean's poetic description: "Mother Nature herself had painted this mural, this infinite masterpiece, which had been conjured into existence by heavenly beings with celestrial pigments of unearthly hues" (quoted in Turney, 2012, p. 162). Even Apsley Cherry-Garrard, who gloomily titled his memoirs The Worst Journey in the World, is captivated by the "beautiful tints in the sky and the delicate shading on the snow ... the deep colours of the open sea ... all brilliant blues and emerald greens" (2012[1922], p. 253). Hence, the collision between the explorer and ice produces imaginaries of Antarctica as both filled with horror but also beautiful and alluring in its purity and clarity.

Science was the main process that helped transform Antarctica from a place of horror into one of purpose and clarity. Explorers such as Apsley Cherry-Garrard, Robert Scott, and later American aviators Richard E. Byrd and Lincoln Ellsworth extolled the virtues of exploration in the service of science. For Cherry-Garrard, science gave worth to the suffering of exploration; he writes, "Science is a big thing if you can travel a Winter Journey in her cause and not regret it" (2012[1922], p. 298). Scott's insistence on collecting scientific samples slowed down his expedition and contributed to its tragic end. Afterwards, supporters would defend Scott against accusations of incompetence by highlighting his contributions to science and the nobler aims it represented. In Cook's journals, he had concluded that Antarctica was of no value and that "the world will derive no benefit from it." Both Louis Bernacchi and Richard Byrd would challenge this assessment. While Antarctic exploration up to the 1950s unearthed little of economic value - "commercially barren" as Byrd writes - its scientific value is immense, and Antarctica has "quietly entered geography as the common domain ... or world science" (Byrd, 1935, p. 4). Hence, science enabled Antarctic explorers to find meaning and purpose in their encounter with the ice.

Conducting science on the terrible and beautiful ice transformed Antarctica into a geography of exception that subverted everyday political conflicts and inspired cooperation. There were the practical realities of science - as German explorer Erich von Drygalski noted in 1903, the continent was simply "too large to be satisfactorily dealt with by one expedition" and that international cooperation would allow scientific data to be gathered "more quickly, more accurately, [and] more satisfactorily" (quoted in Day, 2013, p. 153). In addition to this practical aspect, the uncanny purity of the ice inspired more profound reflections on what the ice symbolized. As Richard Byrd wrote in 1938, "the vastness, clearness, whiteness, silence, the purity, the elevation above the petty quarrels and ambitions of men and nations, combine to form a majestic symbol of what man should want most, peace on earth ... it is a sermon on ice" (quoted in Glasberg, 2012, p. 645). Together Antarctica's dangerous and utopian qualities combined to transform it into a geography of exception that facilitated cooperation between human societies in an effort to conquer the ice.

#### 3.2. From the ice to the conference room

Antarctic explorers knew they were writing for an international audience, and the imaginary they created of Antarctica as an extraordinary place of purity and endurance not only shaped public perceptions, but also informed diplomatic negotiations at the 1959 Washington Conference.<sup>1</sup> The conference established the ATS to preserve Antarctica "exclusively for peaceful purposes" as a place for scientific collaboration rather than "international discord" – Article I bans military bases, manoeuvres, and weapons testing and Article V prohibits nuclear explosions and disposal of nuclear waste. To achieve this, Article IV freezes existing sovereignty claims, transforming Antarctica from a site of traditional bordering practices into one of collective human solidarity against the ice. In examining the delegates' opening and closing statements, glimmers of Antarctica as a geography of exception can be found, and this imaginary played an important role in facilitating the political reimagining of Antarctica.

First, like explorers, diplomats at the Washington Conference emphasized the tremendous remoteness and emptiness of Antarctica. For example, in his closing statement, the head of the Australian delegation Howard Beale describes Antarctica as a "frozen waste" and a "remote, lonely and inhospitable place with far more penguins on it than people". Similarly, the French delegate notes the "harsh climate of the South Pole", the British delegate characterizes it as "remote and unpeopled", and the South African delegate paints it as the "most barren and desolate" of the continents of the world (National Archives of Australia, 1959). New Zealand's opening statement describes Antarctica as a "vast and icy waste of 6,000,000 square miles, lying more in darkness than in light" with "no permanent inhabitants" (Ministry of Foreign Affairs and Trade, Head Office). In reality, Antarctica experiences equal amounts of sun and darkness throughout the year and, as the Beale noted, is brimming with permanent non-human residents. However, New Zealand's insistence in conjuring a sense of emptiness and darkness draws from and reinforces existing imaginaries of Antarctica as a dark, distant, and desolate place of exception. Doing so sets the scene for a collective human story of conquest.

Of course, part of Antarctica's 'darkness' is epistemic in that despite past efforts, it remains, as the Belgian delegate notes, "full of mystery" mysteries that, according to the French delegate, "Nature defends so fiercely in the South Polar Continent". Uncovering Nature's mysteries depended on the pursuit of science and the heroic exploits of explorerscientists. In its closing statement, the New Zealand delegate refers to an incident that occurred during the conference where three men fell down a hidden crevasse in the ice. These men "were risking their lives, as many other brave men have done before in Antarctica, in seeking to add to what is known." Here, diplomats echo Cherry-Gerrard's declaration that upholds science as the foremost aim of Antarctic exploration because it adds to human knowledge. Indeed, these explorer-scientists' ability to weather hardship and overcome obstacles ought to shine as an example for diplomats at the Conference. In its opening statement, New Zealand contended that "in seeking solutions of the problems confronting this Conference, we cannot do better than remind ourselves of the manner in which the tremendous physical hardships and difficulties of the Antarctic Continent have over the years been met and conquered by the great explorers of many nations". Here, New Zealand hammers home a parallel between explorers' efforts to overcome tremendous physical obstacles on the ice and diplomats' efforts to overcome tremendous political obstacles. Imaginaries of Antarctica as a mirror and test of individual and collective character translated into the conference room as diplomats mapped the geopolitical struggles of the day onto the contours of the icy slopes.

In their closing statements, the French and Norwegian delegates were even more explicit in articulating a parallel between Antarctic exploration and their own diplomatic work. The French delegate congratulated the conference, asserting that "as we look back, we can justly feel that it is an exceptional success to have been able to conquer so many obstacles which, to us, seemed as insurmountable as those with which the daring explorers of Antarctica had to cope". He even describes their struggles in heroic terms: "each day that went by could bring about the failure of the Conference, but each day that passed brought to us a strengthened hope of success." With the same daring spirit as Antarctic explorers, the conference delegates conquered the seemingly impossible obstacles before them. Likewise, the Norwegian delegate extolled the virtues of explorers: "The thrilling saga of Antarctica has inspired men everywhere with its emphasis on basic human values – courage, patience and willingness to work together towards a common goal". He then draws the comparison between exploration and the Conference, noting, "I hope that the chapter which we have added here, will not be found to be entirely void of these values, and that it may inspire men to undertake similar ventures". These statements draw a clear comparison between scientist-explorers who overcome hardships to conquer the ice and diplomats who overcome hardships to conquer international politics, framing both as heroic in the name of humanity.

For diplomats at the Conference, the aim of uncovering the secrets of Nature in Antarctica depended on overcoming political disagreements through the freezing of existing sovereignty claims. As the Japanese delegate stressed, the treaty agreement rests on claims being "frozen in connection with territorial rights". Chile also highlights the "freezing of rights" as an important conference achievement, while New Zealand envisions Antarctica as "permanently sealed off from the tension of the Cold War". By reinforcing Antarctica as a geography of exception distant, frozen, and sealed off from geopolitical competition elsewhere diplomats prevailed against petty everyday politics to create what the Chilean delegate called "a noble example ... that lifts from the heart of man distrust and fear". Through scientific cooperation, the diplomats and their nations joined together to dispel the moral and epistemic darkness of Antarctica to achieve what the Soviet delegate hailed as "universal peace and progress". Hence, through the act of freezing, the ice creates the conditions for humanity to collectively prove itself by challenging territorial borders and forging scientific cooperation to uncover Nature's mysteries.

#### 4. The uncanny ice and alien space: hardening the humannature border

The encounter between explorers and the ice created an uncanny borderscape where Antarctica as a geography of exception enabled the freezing of political rivalries over sovereignty. However, to maintain Antarctica's ability to foster solidarity between humans, survival on the ice also created and reinforced a new battlefront between human society and nature. If freezing is a moral good that led international society to 'universal peace and progress', then the fear of thawing represents anxieties surrounding a different ontologically important border - the delineation between the human and nonhuman, the familiar and alien. The Antarctic ice is a perfect place to dream about freezing the past and building a utopian international space for collaborative science, but also the perfect place to imagine what horrors might be unleashed if the ice thaws. In this section, I explore how the frozen Antarctica represents an uncanny borderscape between the familiar and alien, and how thawing signifies a threat to international society physically, politically, and metaphorically. Keeping Antarctica frozen as a geography of exception, then, is also a call to harden the borders between a known human self and society, and the alien unknown that lurks in the icy shadows.

In his essay on the desert and ice, Yi-Fu Tuan suggests that Antarctica signifies an 'alien space' where glimpses of the sublime have the potential to overwhelm the distinction between self and other. Tuan contrasts alien space to homeplace – one's immediate surroundings full of familiarity and routine – and homespace – the next circle outside of homeplace such as a garden where one might develop a mediated appreciation of nature. In Antarctica, homespace disappears as the homeplace of the tent or cabin leads directly to the alien space of the ice where all emotions are "absorbed or taken over by the overmastering presence of nature" (Tuan, 1993, p. 155). The individual loses themselves as they confront the enormity of the ice and wind, and Tuan

<sup>&</sup>lt;sup>1</sup> Twelve states attended the Conference: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, US, USSR, UK.

suggests this loss of self equates to an embrace of death. Hence, this imaginary of Antarctica as alien space represents a negation of the human before the awesome forces of nature.

In her scholarship, Elizabeth Leane (2005, 2012) examines how science and speculative fiction writers work with the idea that nature in Antarctica is frighteningly alive and threatens to overpower the human. The ice as a powerful alien force threatens to upend established hierarchies between active human agents that conduct science and conquer nature, and the passive ice that remains the backdrop to human heroism. For example, Morten Moyes who joined Douglas Mawson's Australasian Antarctic Expedition in 1911 as a meteorologist, reflects in his memoirs on the substantial time he spent alone with the ice:

I could at times think of all Antarctica as ... a slow-brained sentient being bent on making a man part of itself ... sprawled gigantically over nearly six million square miles, immovably gripping the southern cap of the earth – deceptively solid and lifeless but actually full of movement and change, with a low amoebic vitality (quoted in Leane, 2012, p. 54).

In this moment of realization, Moyes is confronted with a liveliness that overturns his preconceptions of the ice and threatens the solidity of the border between human explorers and the ice. Others have echoed this realization that the uncanny ice is somehow alive and powerful. Another one of Mawson's men Charles Laseron writes that his first impression of Antarctica was of its "hostile beauty" and how later, Antarctica became to him "a relentless, resentful and definite personality, which ever waited implacably for the single false step that would land the intruders into its power" (quoted in Hains, 2002, p. 50). Upon reaching the central Antarctic plateau, Laseron articulates its unsettling effect on him: "I hate this icy plateau. It gets on one's nerves". Laseron's descriptions suggest a confrontation with not a lifeless backdrop, but a lively ice with so much personality it could get on someone's nerves. Hence, the encounter between the explorer and the ice also creates an imaginary of Antarctica as hauntingly alive - a world where the border between the human and alien is threatened by thaw.

#### 4.1. Speculative fiction and the thawing of monsters

Writers of Antarctic speculative fiction drew heavily from explorers' accounts to construct their worlds while filling in the gaps with fantastical imaginings (Glasberg, 2008; Leane, 2005). In particular, these writers adopted the idea that in the extreme polar south, nature is alive, powerful, and metaphysically dangerous. In the late-18th century, Samuel Coleridge drew on Cook's journals for his The Rime of the Ancient Mariner in which killing an albatross dooms the protagonist to a hellish fate. Cook describes the dangerous route south as his ice-covered ships traversed through "thick fogs, snow storms, intense cold and every other thing that can render navigation dangerous." These physical perils were compounded by metaphysical horrors: "the inexpressible horrid aspect of the country, a country doomed by nature never once to feel the warmth of the sun's rays, but to lie forever buried under everlasting snow" (Kippis, 1788). In his poem, Coleridge (1838) conveys this sense of a cursed geography - a place where nature is alive and the ice "cracked and growled, and roared and howled". Inspired by Coleridge and American explorer Jeremiah Reynolds, Edgar Allan Poe's The Narrative of Arthur Gordon Pym ends with the protagonist heading towards the South Pole as a shrouded figure in white arises to greet him: "there rose in our pathway a shrouded human figure, very far larger in its proportions than any dweller among men. And the hue of the skin of the figure was of the perfect whiteness of the snow" (Poe, 1838). Here, Antarctica is personified in a figure that consumes the narrator. In both accounts, nature is powerful and alive with alien agency. It overwhelms the human protagonists with a force they cannot comprehend let alone control.

In the 20th century, H. P. Lovecraft drew from these traditions and accounts of aerial exploration over Antarctica, particularly Richard

Byrd's memoirs,<sup>2</sup> to craft the disquieting horror evoked by At the Mountains of Madness. In his writings, Byrd had celebrated Antarctic's utopian purity, but in darker moments he also casts the ice and wind as malicious forces. He writes of the Antarctic blizzard: "its vindictiveness cannot be measured on an anemometer sheet ... the whole malevolent rush is concentrated upon you as a personal enemy ... you can't see, you can't hear, you can hardly move ... nothing in the world will so quickly isolate a man" (Byrd, 1938, p. 154). Here, Antarctica functions as Tuan suggests, a sublime alien space and antithesis of home that threatens to dismantle the border between the self and the alien. To further the comparison between being consumed by this alien liveliness and death, Byrd writes morosely: "A funereal gloom hangs in the twilight sky. This is the period between life and death. This is the way the world will look to the last man when it dies" (Byrd, 1938, p. 74). These quotes continue to paint Antarctica as a geography of exception, but full of horror and existential dread rather than hope.

Inspired by the all-consuming malevolence Byrd encountered in Antarctica, Lovecraft's story is framed as a warning to all those who seek to conduct science there. While reluctant, the narrator Dr. William Dyer feels he must step forward because "men of science have refused to follow my advice without knowing why," and he wished to dissuade "any rash and overambitious program in the region of those mountains of madness" (Lovecraft, 2018[1936], p. 3). On a scientific expedition in Antarctica, Dyer and his team drill into the ice and uncover curious frozen specimens of potentially groundbreaking scientific value. As the rest of the story unfolds, we discover the specimens are the not-quite-dead remains of an ancient civilization - the Elder Things and they awaken to kill most of the party and drive the rest insane. Here, Lovecraft plays with explorers' desire to make discoveries, but instead of heroism and enlightenment, these scientists' curiosity leads them to thaw and awaken creatures of madness and terror. Critics have noted that a deep racism animates Lovecraft's worldmaking, particularly in the pervasive fear he constructs around impurity or miscegenation (House, 2017; Paz, 2012). The melting ice and its shapeshifting monsters embody this fear of mixing as the uncanniness of Antarctica upsets established boundaries between the self and alien. Lovecraft creates a world of terror in the thawed ice. To avoid such a fate, the line between the human and alien must be hardened and the ice and its dark mysteries must be kept frozen.

In the same decade as Lovecraft's novella, John W. Campbell published another speculative account of the metaphysical horror that awaited in the thawing Antarctic ice. Printed in 1938, Campbell's short story 'Who Goes There?' originally included three introductory chapters that narrate how a scientific team sent to investigate disturbances at the magnetic South Pole drill into the ice to find frozen creatures with "blue hair like earthworms and three red eyes". The published short story cut these first chapters and begins after the team takes the specimen back to their cabin to thaw. McReady, who becomes the group's leader, has nightmares about the specimen and suggests: "put it back where it came from and let it freeze for another twenty million years" (Campbell, 2019 [1938]). Here, McReady voices his anxieties about thawing in the name of scientific discovery - science can be a dangerous enterprise and awaken monsters that ought to be kept frozen. McReady's warnings are ignored, and the thawed alien - the Thing - comes alive to terrorize the camp. It has the uncanny ability to transform itself into anything it encounters, including human beings, and the rest of the story charts how the group confronts the existential crisis they now face: how to

<sup>&</sup>lt;sup>2</sup> In a bid to be the first man to winter 'alone' in Antarctica and personify rugged individualism in the conquest of nature, Byrd spent five months by himself in Antarctica during the winter of 1934 and documented his near-death experience in his memoir *Alone*. Of course, as some have pointed out, he was far from actually being alone with daily radio contact with his team and a final rescue when he started poisoning himself with carbon monoxide (Tuan, 1993; Howkins, 2013).

distinguish authentic humans from imitations. Ultimately, unlike Lovecraft's narrative where the human is consumed by the overpowering alien space of Antarctica, Campbell's story reinstates and celebrates the border between the familiar self and the alien other. In the end, McReady the scientist is able to outthink the alien by devising a test to detect authentic humans by using a hot wire and a Petri dish. The homeplace of the camp is restored through human ingenuity and the alien threat is kept at bay. <sup>3</sup>

In her analysis of the short story, Elena Glasberg highlights the importance of thawing as "the characteristic marker of temporal or spatial change in ice that underscores the connection between the Thing and the shifting, unsettling place of Antarctica" (2008, p. 649). Hence, the ice's shapeshifting abilities as it thaws place it in the same worrying category as Campbell's shapeshifting aliens that could never really be pinned down except perhaps by science. Similarly, Elizabeth Leane equates the Thing to the southern continent, suggesting Antarctica's "lack of stability, its changeability, its boundary breaching" mirrors the qualities of Campbell's invader (2005, p. 236). Hence, for Campbell and other writers, Antarctica as a fluid and uncanny borderscape signifies a dangerous instability in the boundary between the human self and alien other where the shapeshifting verb of 'thawing' threatens to overturn established certainties.

This anxiety around thawing, however, is not confined to the pages of science fiction but saturates the climate politics of Antarctica today and forecasts frightening scenarios for the planet's future. Fear of thawing manifests in several ways. Foremost and looming, climate change threatens to physically thaw the ice, particularly the Thwaites Glacier, the so-called 'doomsday glacier', which could increase global sea levels by more than half a meter (Yazgin, 2023). Mixed with this fear, journalists and scientists also depict 'alien' invasions from nonnative species brought unintentionally by scientists, explorers, and now increasingly tourist cruises as a fearful eventuality that must be stopped to protect the vulnerable ice. While not from outer space, these invaders threaten the 'fragile' and 'pristine' nature of Antarctica as a scientific laboratory frozen in time (see for example Intagliata, 2020; Gross, 2022). Finally, there is the fear of political thawing which permeates media and civil society narratives of the future of the ATS. In particular, these fears revolve around whether the existing agreement to freeze sovereignty claims will continue, or whether new global powers such as China might wish to thaw the agreement and return to traditional border contestations (Glenn, 2023; Reuters, 2023). Hence, science fiction accounts capture the unsettling sense that the thawing Antarctica holds manifold horrors, and the imaginative worlds these stories create continue to inform our understanding of the dangers that emanate from the thawing ice.

#### 5. Melting the border

Traditional delineations of homeplace and alien space transform Antarctica, the extreme alien space, into a place of horror where unfamiliar outsiders threaten to overwhelm the familiar self and erase the border between the human and alien. Such a dangerous undoing of the border represents an existential threat to the frozen political and metaphysical landscape of Antarctica. However, critical theorists and speculative fiction writers have questioned the strict border between the

familiar self and alien other and challenged efforts to maintain the purity of either. Donna Haraway combines the organic self and machine others in the uncanny assemblage of the cyborg where "nature and culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other" (2016b[1985], p. 9). Instead, cyborg politics embraces a messiness and entanglement between the two that "insist on noise and advocates pollution" (Haraway, 2016b[1985], p. 57). Similarly, Alexis Shotwell argues against purity as a form of violent border-making through "the rhetorical or conceptual attempt to delineate and delimit the world into something separable, disentangled, and homogenous" (2016, p. 26). These efforts to establish inside-outside distinctions hold us spellbound and prevent us from realizing that we have always been entangled with the alien other and contaminated. Considered in light of the celebrated utopian 'purity' of the Antarctic ice, these critiques help us question the strict demarcation between the familiar self and alien other.

In her short story 'Sur', Ursula Le Guin brings another uncanny presence to the ice that challenges established borders between the familiar self and the alien - women. For much of its history, Antarctica had been the province of masculine endurance, courage, and camaraderie, and expedition huts were famous for being sites of 'boyish' antics during long periods of waiting. But, as Leane observes, women have long imagined themselves on the ice even if men have not (2012, p. 100).<sup>4</sup> Le Guin's story narrates how a group of women from Argentina and Chile reached the South Pole first, an entire year before Amundsen and Scott, but left no trace. When they reached Antarctica, instead of purity and cleanness, they describe the squalor the Scott expedition had left behind at Hut Point: "It ... was disgusting - a kind of graveyard of seal skins, seal bones, penguin bones, and rubbish" (2015[1982], p. 549). Inside the hut, "it was dirty, and had about it a mean disorder ... empty meat tins lay about; biscuits were spilled on the floor, a lot of dog turds were underfoot" (2015[1982], p. 550). Here, Le Guin creates a parody of traditional narratives that praise the untouched purity of the ice, and instead lays bare the contaminated homeplace of the manly explorers.

Instead of salvaging Scott's hut, the women decide to create their own homeplace by tunneling in the ice. What emerges is a collaboration between the women and the ice that seemed to challenge the distinction between the familiar home and foreign ice. This partnership was poetically represented by how one of the women, Berta, created an artist studio to craft ice sculptures - "beautiful forms, some like a blending of the reclining human figure with the subtle curves and volumes of the Weddell Seal, others like the fantastic shapes of ice cornices and ice caves" (2015[1982], pp. 552–3). But perhaps the main difference between Le Guin's explorers and those of the heroic age of Antarctic exploration is a commitment to leave no trace of themselves and their 'achievements'. The story ends with: "we left no footprints, even" (2015 [1982]: 561). This commitment subverts heroic narratives of conquest, either for national gain or as the expression of humanity's superiority over nature. Le Guin challenges masculine heroism, commenting "the achievement is smaller than men think. What is large is the sky, the earth, the sea, the soul" (2015[1982], p. 551). She transforms exploration from a show of superiority into a communion with the ice that thaws the border between the human and alien.

But perhaps Le Guin's greatest love poem to Antarctic exploration is in the final chapters of *The Left Hand of Darkness* where the two protagonists from different planets travel across a treacherous icy landscape. In this book written fifteen years before 'Sur', as Le Guin herself summarizes, "a Black man from Earth and androgynous extraterrestrial pull Scott's sledge through Shackleton's blizzards across a planet called

<sup>&</sup>lt;sup>3</sup> 'Who Goes There?' has inspired several cinematic adaptions including The Thing from Another World (1951), The Thing (1982), and The Thing (2011) which is a prequal of the 1982 film even though they confusingly share the same name. The 1982 version starring a young Kurt Russell is perhaps the most famous, but unlike the original story, this version does not have a happy ending and the camp (i.e., the homeplace) is destroyed in a violent standoff accompanied by a mushroom cloud. Russell's McReady is not a scientist; instead, he is an alcoholic helicopter pilot who is portrayed as the ultimate anti-intellectual. In this Cold War remake, the least scientific mind is cast as the antihero.

<sup>&</sup>lt;sup>4</sup> For example, ahead of Shackleton's Endurance expedition, he received thousands of applications including a letter from 'three sporty girls' Peggy Pegrine, Valerie Davey, and Betty Webster. They write: "We do not see why men should have all the glory, and women none, especially when there are women just as brave and capable as there are men" (Pegrine, 1914).

Winter" (1989, p. 185). Le Guin's beautifully rendered prose contrasts the warmth of the tent the duo sets up each night with the lonely iciness beyond. But rather than a story that depicts fear of the unknown ice or the hardening of borders between the familiar and alien, Le Guin uses the diminishing distance between the alien space outside and the homeplace inside to melt the border between the self and alien. For much of the novel, Genly Ai from earth feels like the alien, a sexual 'pervert' with only one sex on a planet where everyone has the potential to be both sexes and only takes on sexual characteristics during temporary periods of 'kemmer'. However, Estraven, the native of Winter, writes in his diary that "up here on the Ice each of us is singular, isolated ... we are equals at last, equal, alien, alone" (1969, p. 250). From that equality in difference arose a deep friendship - "not from the affinities and likenesses, but from the differences, that that love came: and it was itself the bridge, the only bridge, across what divided us" (1969, p. 267). Gloria Anzaldúa had referred to her conceptualization of Borderlands as a 'bridge idea', and Antarctica as an uncanny borderscape acts as that bridge between the familiar and alien. On the shapeshifting ice that reflects the shapeshifting ambisexual beings of Winter, Le Guin shows us a way to bridge the familiar self and alien other, not through dissolving differences into commonality and sameness, but in solidarity while pulling the same sledge.

There are many ways to narrate the story of Antarctica as an uncanny borderscape between the familiar and alien. Some stories, as Haraway argues, reinforce the classical masculine hero narrative of "one real actor, one real world-maker, the hero ... the hunter on a quest to kill and bring back the terrible bounty," while everything and everyone else takes on the role of background that "don't matter ... their job is to be in the way, to be overcome, to be the road, the conduit" (2016a, p. 118). It is a tale of the determined self, 'alone' as Richard Byrd's memoir adamantly tells us, against the outside world waiting to be conquered. Instead of the hero narrative, Haraway points to Le Guin's 'carrier bag' theory where "a book holds words. Words hold things. They bear meanings. A novel is a medicine bundle, holding things in a particular, powerful relation to one another and to us" (1989, p. 182). One might criticize the carrier bag analogy as latent with capitalist violence in the collection of things (Rexer, 2017). However, in focusing on the relationality between what I interpret as metaphorically collected things, Le Guin stresses a story of togetherness, entanglement, and complicity that can create bridges and reframe the thawing of borders between the human and alien not as an unmitigated horror but as an opportunity.

This is not to defend or downplay the violence of some thawing – particularly the physical thawing of Antarctic ice as a result of anthropogenic climate change – but to challenge the hardened purity of the ice as something that we must defend at all costs. Science fiction that creates worlds of horror in the thawing ice suggests that we must use science to keep Antarctica frozen and defend the border between the human and alien. However, as Le Guin demonstrates, other ways of worldmaking in Antarctica also show us the danger of keeping things frozen, of hardening the borders between what belongs and what is alien, of defending international hierarchies and a status quo that perhaps should no longer hold. Framing Antarctica as a borderscape and bridge between the liquid and solid, the self and alien, the human and nonhuman opens us up to generative possibilities of hybridity and solidarity that shimmer in the ice.

#### 6. Conclusion

Antarctica has always been portrayed as a place of harsh beauty and elemental purity, an uncanny place not quite of this world where one is confronted with the unadulterated forces of nature. Throughout the history of human exploration in Antarctica, explorer-scientists have described the southern continent as a place of peace, solitude, and wonder. Even in the 21st century, travel writer Barry Lopez expresses this utopian vision of Antarctica. He reflects on the suffering he had seen elsewhere in the world from the Horn of Africa to Juarez, Mexico, and the anger he felt towards injustices and cruelties in these places, and confesses, "It did not escape me that I returned as often as I did to Antarctica because it offered a kind of relief I could find nowhere else" (Lopez, 2019, p. 545). Antarctica was a 'balm' against the political injustices and anguish Lopez experienced elsewhere, a place where he could delight in scientific wonder at the natural world. At the same time, some travelers and fiction writers offer a more sinister imaginary of Antarctica as an uncanny place of horror where dangerous alien forces threatened to overwhelm the self. Since the late-19th century, stories of 'polar madness' conjure Antarctica as a dystopian world as the darkness and isolation of the long polar winter drive people insane. In 2018, a Russian engineer at Bellingshausen station stabbed a colleague in the chest for too many spoilers that ruined the endings of books (Sancton, 2021). From the crew of the *Belgica* to today, the ice threatens to reveal real and metaphorical monsters that ought to be kept frozen.

Investigating Antarctica as an uncanny borderscape allows us to examine how the collision between the human world and the ice produced both utopian and dystopian imaginaries of Antarctica as a geography of exception. In addition, it challenges Euclidian notions of space as flat and fixed just as it challenges our assumptions that the ice is simply an inert background to human heroism. In its fluidity in traversing the border between freezing and thawing, borderscape Antarctica is alive with lively, imaginative potential.

Scientist-explorers who encounter the ice both praise its frozen purity as a place to create a better world of cooperative science and bemoan its darkness and extreme isolation as a place of horror where perilous nature threatens to subsume the human. This double-sided imaginary of Antarctica as an exceptional geography enabled utopian worldmaking at the 1959 Washington Conference when international diplomats concluded a cooperative agreement to freeze sovereignty claims and rise above traditional territorial conflicts elsewhere. At the same time, these imaginaries also inspired dystopian worldmaking from writers who envisaged what monsters might lurk beneath the ice in a thawing Antarctica. Hence, Antarctica as an uncanny zone of encounter has the generative potential to challenge borders but also harden them in an effort to keep Antarctica pristine and frozen. As we face the uncertainties of climate change and the melting ice, these imagined worlds may well transform into international political projects just as they did in 1959. Understanding the implications of these imagined worlds on the ice, then, is central to how we come to terms with our planetary future

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#### References

Aradau, C., & Tazzioli, M. (2021). Covid-19 and rebordering the world. Radical Philosophy, 210, 3–10.

Barla, J., & Hubatschke, C. (2017). Technoecologies of borders: Thinking with borders as multispecies matters of care. Australian Feminist Studies, 32(94), 395–410.

- Bell, D. (2013). Making and taking worlds. In S. Moyn, & A. Sartori (Eds.), *Global intellectual history* (pp. 254–280). New York: Columbia University Press.
- Bernacchi, L. C. (1901). To the South polar regions: Expedition of 1898-1900. London: Hurst and Blackett.
- Bloom, L. (2022). Climate change and the new polar aesthetics. Duke University Press. Brambilla, C. (2015). Exploring the critical potential of the borderscapes concept. Geopolitics. 20(1), 14–34.
- Byrd, R. (1935). *Discovery: The story of the second Byrd antarctic expedition*. New York: G. P. Putnam's sons.
- Byrd, R. (1938). Alone. New York: G.P. Putnam's sons.
- Campbell, J. W. (2019). Frozen hell. Rockville, MD: Wildside Press LLC, 1938.
- Carabelli, G. (2018). (Re)Addressing Mostar: Global imaginaries, local activisms. Journal
- of Urban Cultural Studies, 5(2), 147–164. Cheah, P. (2016). What is a world? On postcolonial literature as world literature. Durham NC: Duke University Press.
- Cherry-Garrard, A. (2012). *The Worst journey in the world*. Durham, NC: Duke Classics, 1922.
- Coleridge, S. (1834). Rime of the ancient mariner. Available online: https://www.poetr yfoundation.org/poems/43997/the-rime-of-the-ancient-mariner-text-of-1834.
- Day, D. (2013). Antarctica: A biography. Sydney: Knopf.
- De Genova, N. (2022). Viral borders: Migration, deceleration, and the Re-bordering of mobility during the covid-19 pandemic. *Communication, Culture and Critique 15*, (2), 139–156.
- dell'Agnese, E., & Amilhat Szary, A. L. (2015). Borderscapes: From border landscapes to border aesthetics. *Geopolitics*, 20(1), 4–13.
- Dodds, K. (2002). Pink ice: Britain and the South atlantic empire. London: I.B. Tauris. Dodds, K. (2006). Post-colonial Antarctica: An emerging engagement. Polar Record, 42 (220), 59–70.
- Dodds, K., & Nuttall, M. (2016). The scramble for the Poles: The geopolitics of the arctic and antarctic. Cambridge: Polity Press.
- Fleischmann, L. (2023). More-than-Human political geographies: Abjection and sovereign power. Political Geography, 107, 1–11.
- Getachew, A. (2019). Worldmaking after Empire: The Rise and Fall of Self-Determination. Princeton NJ: Princeton University Press.
- du Plessis, G. (2018). When pathogens determine the territory: Towards a concept of non-human borders. European Journal of International Relations, 24(2), 391–413.
- Glasberg, E. (2008). Who goes there? Science, fiction, and belonging in Antarctica. Journal of Historical Geography, 34, 639–657.
- Glasberg, E. (2012). Antarctica as cultural critique: The gendered politics of scientific exploration and climate change. New York: Palgrave Macmillan.
- Glenn, M. (2023). China's frozen frontier: Antarctica next on list in quest for pole-to-pole power. Washington Times. available at: https://www.washingtontimes.com/new s/2023/jan/24/polar-opposite-chinas-growing-push-antarctica-spar/. (Accessed 20 June 2023).
- Gregory, D. (2009). Geographical imaginary. In D. Gregory, et al. (Eds.) (5th ed.), Vol. 282. The dictionary of human geography. Wiley-Blackwell.
- Griffith, T. (2007). Slicing the silence: Voyaging to Antarctica. London: Harvard University Press.
- Gross, M. (2022). Pristine Antarctica exposed to change. *Current Biology*, 32(6), R247–R249.
- Hains, B. (2002). The ice and the inland: Mawson, flynn, and the myth of the frontier. Melbourne: Melbourne University Press.
- Haraway, D. (2016a). Staying with the trouble: Making kin in the chthulucene. Durham, NC: Duke University Press.
- Haraway, D. (2016b). A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century. Minneapolis MN: University of Minnesota Press, 1985.
- House, W. (2017). We can't ignore H.P. Lovecraft's white supremacy. *Literary Hub.* Available at: https://lithub.com/we-cant-ignore-h-p-lovecrafts-white-supremacy/. (Accessed 24 June 2023).
- Howie, B., & Lewis, N. (2014). Geographical imaginaries: Articulating the value of geography. New Zealand Geographer, 70(2), 131–139.
- geography. *New Zealand Geographer*, 70(2), 131–139. Howkins, A. (2013). The significance of the frontier in Antarctic history: how the US West has shaped the geopolitics of the far south. *The Polar Journal*, *3*(1), 9–30.
- Howkins, A. (2017). Frozen empires: An environmental history of the antarctic peninsula. Oxford: Oxford University Press.
- Intagliata, C. (2020). Antarctica is ripe for invasive species. Scientific American. Available at: https://www.scientificamerican.com/podcast/episode/antarctic-is-ripe-for-inva sive-species. (Accessed 20 June 2023).
- Keating, A. (2009). The anzaldúan theory handbook. Durham NC: Duke University Press. Kirby, P. (2020). The body weaponized: War, sexual violence and the uncanny. Security Dialogue, 51(2–3), 211–230.
- Kothari, U., & Wilkinson, J. (2011). Colonial imaginaries and postcolonial
- transformations: Exiles, bases, beaches. *Third World Quarterly*, *31*(8), 1395–1412. Kristeva, K. (1988). *Stranger to ourselves*. New York: Columbia University Press.
- Lajus, J., & Sörlin, S. (2014). Metling the glacial curtain: The politics of scandinaviansoviet networks in the geophysical field science between two polar years. *Journal of Historical Geography*, 44, 44–59.
- Le Guin, U. (1969). Left Hand of darkness. New York: Ace.
- Le Guin, U. (1989). Dancing at the edge of the world. New York: Grove Press.

- Le Guin, U. (2015). *The wind's Twelve quarters & the compass rose*. London: Orion Publishing Group, 1982.
- Leane, E. (2005). 'Locating the thing: The antarctic as alien space in John W. Campbell's 'who goes there?'. *Science-Fiction Studies*, 32(2), 225–239.
- Leane, E. (2012). Antarctica in fiction: Imaginative narratives of the far south. Cambridge: Cambridge University Press.

Lopez, B. (2019). Horizon. New York: Alfred A. Knopf.

Lovecraft, H. P. (2018). At the mountains of madness. Milton Keynes: Penguin, 1936.

- Kippis, A. (1788) A narrative of the voyages round the world performed by Captain James Cook. Available at: https://www.gutenberg.org/cache/epub/7777/pg7777 -images.html (accessed 14 June 2023).
- Ministry of Foreign Affairs and Trade, Head Office (ABHS), KL 248/1/1, R17727584, archives New Zealand Te rua mahara o te kāwanatanga, Wellington.
- Mezzadra, M., & Neilson, B. (2013). Border as method, or, the multiplication of labor. Durham, NC: Duke University Press.
- National Archives of Australia (NAA). (1959). Conference on Antarctica; A10728, summary record – fourth plenary session. Tuesday. DOCUMENT 25.
- Nyman, J. (2022). Kapka Kassabova and ben Judah: Writing borders and borderscapes in contemporary Europe. Journal of Borderland Studies.
- O'Reilly, J. (2017). The technocratic antarctic: An ethnography of scientific expertise and environmental governance. Ithaca: Cornell University Press.
- Paz, C. G. (2012). Race and war in the Lovecraft Mythos: A philosophical reflection. Lovecraft Annual, 6, 3–35.
- Pegrine, P. (1914). A letter of application to join Ernest Shackleton's Endurance expedition. 1537/2/30/5-6. D, Scott Polar Institute Archives. available at: https://www.spri. cam.ac.uk/archives/shackleton/articles/1537,2,30,5-6.html. (Accessed 10 June 2023).
- Peters, Steinberg, K. P., & Stratford, E. (Eds.). (2018). *Territory beyond Terra*. London: Rowan & Littlefield.
- Poe, E. A. (1838). The narrative of Arthur Gordon Pym of Nantucket. New York: Harper & Brothers. Available at: https://www.gutenberg.org/cache/epub/51060/pg51060-im ages.html. (Accessed 15 June 2023).
- Powell, R. (2007). "The rigours of an arctic experiment": The precarious authority of field practices in the Canadian high arctic, 1958-1970. Environment and Planning A: Economy and Space, 39(8), 1794–1811.
- Prince, H. (1962). The geographical imagination. Landscape, 11, 22-25.
- Pyne, S. (1986). The ice. London: Weidenfeld & Nicolson.
- Rajaram, P. K., & Grundy-Warr, C. (Eds.). (2007). Borderscapes: Hidden geographies and politics at territory's edge. Minnesota: University of Minnesota Press.
- Reuters. (2023). Surveillance fears as China resume construction on fifth Antarctic base. The Guardian. available at: https://www.theguardian.com/world/2023/apr/18/chi na-antarctic-station-inexpressible-island. (Accessed 20 June 2023).
- Rexer, G. (2017). What's in your bag. Ursula K. Le Guin? Diffrakt. Available at: http://diff rakt.space/en/whats-in-your-bag-ursula-k-le-guin/. (Accessed 15 June 2023).
- Rothmüller, N. (2021). Covid-19. Borders, world-making, and fear of others. Research in Globalization, 3, 1–9.
- Royle, N. (2003). The uncanny. Manchester: Manchester University Press.
- Sancton, J. (2021). A brief history of people losing their minds in Antarctica. GQ. Available at: https://www.gq.com/story/insane-in-antarctica-excerpt. (Accessed 4 August 2023).
- Shackleton, E. (1998). South: The last antarctic expedition of Shackleton and the endurance. New York: Lyons Press, 1919.
- Shotwell, A. (2016). Against purity: Living ethically in compromised times. Minneapolis: University of Minnesota Press.
- Steinberg, P., & Peters, K. (2015). Wet ontologies, fluid spaces: Giving depth to volume through oceanic thinking. *Environment and Planning D: Society and Space, 33*, 247–264.
- Ticktin, M. (2017). Invasive others: Toward a contaminated world. Social Research: An international Quarterly, 84(2), xxi-xxxiv.
- Tuan, Y. F. (1993). Desert and ice: Ambivalent aesthetics. In S. Kemal, & I. Gaskell (Eds.), Landscape, natural beauty and the arts. Cambridge: Cambridge University Press.
- Turney, C. (2012). *1912: The year the world discovered Antarctica*. Berkeley CA: Counterpoint.
- Wang, C.-M. (2023). Towards a solid-fluid territory: Sand dredging, volumetric practices, and earthly elements. *Political Geography*, 106, 1–10.
- Wood, G. (2020). Land of the wondrous cold: The race to discover Antarctica and unlock the secrets of its ice. Princeton: Princeton University Press.
- Yao, J. (2021). An international hierarchy of science: conquest, cooperation, and the 1959 Antarctic Treaty System. *European Journal of International Relations*, 27(4), 995–1019.
- Yao, J. (2022). The power of geographical imaginaries in the European international order: Colonialism, the 1884–85 Berlin Conference, and model international organizations. *International Organization*, 76(4), 901–928.
- Yao, J. (2022). The ideal river: How control of nature shaped the international order. Manchester: Manchester University Press.
- Yazgin, E. (2023). Ice breaker: How worried should we be about melting glaciers in Antarctica. Cosmos. Available at: https://cosmosmagazine.com/earth/glacier-ant arctica-sea-level/. (Accessed 20 June 2023).