



Human-Other Entanglements in Speculative Future Arctics

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Abstract: Migrating from the periphery into the global consciousness, the vast Arctic is central to discussions about anthropogenic climate change. The spatio-temporal scope of environmental changes poses complexities for scientific and cultural debates but also allows for imaginative responses in fiction. Speculative climate fiction is generated by real-world anxieties and aspirations but imaginatively and productively explores the effects of accelerated change. In this article, we apply Stacy Alaimo's and Donna Haraway's theoretical concepts, which assert entanglements between humans and others in the more-than-human environment, in our analyses of Laline Paull's *The Ice*, Sam J. Miller's *Blackfish City*, and Vicki Jarrett's *Always North*, three novels that engage with climate change and its effects in the Arctic. Entanglements find different forms depending on the level of speculation in the works examined, but they all demonstrate the detrimental centrality of the human in past and future paradigms.

Keywords: Arctic, speculative fiction, entanglement, polar bear, more-than-human, climate change

1. Introduction

Migrating from both a literal and a figurative periphery into the global consciousness, the vast Arctic is central to contemporary discussions and tendentious debates about anthropogenic climate change. Although the Arctic is traditionally viewed in ways that highlight its frozen immutability, requiring hardy characteristics from both its inhabitants and visitors, in actuality, the fastest changes on the planet are now taking place in the Arctic areas, in the form of two cyclical processes. Firstly, in what is known as Arctic amplification,

human-driven accelerated warming resulting in the diminishing of sea ice means that temperatures are increasing two to three times as fast in the Arctic as in the world at large, and the rapidly melting polar ice cap will, like its southern counterpart, profoundly affect not only nearby areas but also distant shorelines (Previdi, Smith, and Polvani). Secondly, despite being at the furthest distance from sites producing various kinds of pollution, ocean currents propel toxins northward, affecting people living in and off the Arctic, its flora and fauna, and even geological structures, which, in turn, has global consequences. This phenomenon is called the Arctic Paradox (Cone). As both processes illustrate, complex entanglements between humans and nature find a particular expression in the world's far north.

The spatial and temporal scales of anthropogenic climate change introduce complexities into both scientific and cultural debates. In these contexts, as well as when authors of fiction attempt to depict the vast ramifications of climate change, there are, as Astrid Bracke notes, "representational and imaginative challenges" to contend with ("Flooded Futures" 280). Still, as attested to by what is growing into a robust genre, climate fiction constitutes a "productive space in which to imagine and think through climate crisis" (280). In a similar vein, Adam Trexler argues that "Fictionalizing climate change is not about falsifying it, or making it imaginary, but rather about using narrative to heighten its reality" (75), and Frederick Buell demonstrates that speculative fiction in particular "acts as an imaginative heuristic for exploring today's omnipresent, fundamental, multiple risk space" (277). Contemporary speculative climate fiction is generated by real-world anxieties and aspirations but remains unrestricted by the realism of the everyday; in many imaginative ways, these works provide spaces for reflections around the causes and effects of the accelerated change and may also illustrate the effects of profound changes in human and other-than-human habits and behaviours.

The far-reaching consequences of climate change, both in time and space, highlight a vast web of entanglements between humans and the other-than-humans, whether the latter denotes other living organisms, climatological systems, or geological structures and events. As a response to theories of constructivism that bloomed in the late 20th century, and that enforced a separation between nature and culture, critics active in the interdisciplinary material turn encourage the blurring of boundaries between previously discrete categories and propose new lines of thinking and new terminologies that no longer privilege the human. Instead, other-than-humans and humans are seen to co-exist in webs of relationality within the more-than-human world. For our purposes, environmental feminist scholars Stacy Alaimo and Donna Haraway provide especially fruitful frameworks for exploring such entanglements. Alaimo foregrounds trans-corporeality, or "material interconnections of human corporeality with the more-than-human world" (2), and Haraway's inclusive, multispecies philosophy calls for a "thinking-with" in fiction as well as in real-world practices (39). Alaimo allocates agency to "flows of substances ... between people, places, and economic/political systems" (9), with toxins circulating through extended networks as a central example. Although the human body's enmeshment with various material forces is the focus of Alaimo's discussions, she avoids a return to or maintenance of anthropocentrism, instead pursuing her inquiries from "a more uncomfortable and perplexing place where the

‘human’ is always already part of an active, often unpredictable, material world” (17). In a similar but also terminological move, Haraway proposes the “Chthulucene” as a more productive term than the Anthropocene.¹ While the latter has gained traction among many scholars because it highlights how enmeshed humans are with planetary systems, it is nonetheless a temporally bound concept that homogenises humanity into a singular Anthropos at the top of a competitive hierarchy – all of which are aspects that Haraway criticises (49).² Instead of working vertically, radiating from a human centre or reflecting a specific time period, the Chthulucene is “lateral and tentacular” (53) and it “entangles myriad temporalities and spatialities and myriad intra-active entities-in-assemblages – including the more-than-human, other-than-human, inhuman, and human-as-humus” (101).³ For both Alaimo and Haraway, speculative fiction contributes imaginative possibilities that can enable perceptual paradigm shifts.

In this article, we provide a comparative, thematic analysis of three recent works of speculative climate fiction: Laline Paull’s *The Ice* (2017), Sam J. Miller’s *Blackfish City* (2018), and Vicki Jarrett’s *Always North* (2019). These novels engage with anthropogenic climate change and its effects in the Arctic, in tandem with explorations of human entanglements with the other-than-human. This parallel exploration proves narratively challenging because of the competing conceptual foundations: human against (and thus outside of) nature *versus* the indivisible entanglements between all life (and non-life) forms.

The Ice is set in a near future and depicts a slightly accelerated temperature rise, with Svalbard at the centre of its consequences. *Blackfish City* takes place a hundred years from now, in a multicultural society established in the now-open waters of the Polar Sea, and the environmental collapse is already in the past (the contemporary reader’s present). *Always North* features two temporal settings – one in 2025, the other twenty years later – and addresses the questions of responsibility and agency in climatological issues in both contexts. The differences between the novels regarding the extent of the futurity depicted allow us to examine climate change as a process that is actively discussed in the narrative present and as a catastrophe that resides in the distant past, but which nevertheless concretely impacts the fictional world. In Paull’s novel, a connection to real-world worries is easily established, whereas the far futures and more elaborate speculative elements presented in the novels by Miller and Jarrett may seem to divorce their depictions from the changes we begin to see around us. However, the anchoring of the latter texts in the Arctic establishes links to present concerns.

Various intricate entanglements between humans and other-than-humans, specifically polar bears, are featured in all three novels, but the works

¹ Like Haraway, other critics have suggested the geological term Anthropocene be replaced by conceptual terms that more precisely, sometimes more locally, describe how humanity has transformed the planet. Among these are the Capitalocene (Andreas Malm, *Fossil Capital* 2016) and the Plantationscene (Anna Tsing, *The Mushroom at the End of the World* 2015), both of which emphasise oppressive socioeconomic structures.

² See *Anthropocene Feminism* (ed., Richard Grusin 2017) for a more comprehensive discussion about feminist theory in relation to the Anthropocene.

³ The final term links to Haraway’s metaphor of the Chthulucene as a “compost pile” in which humans are not discrete but part of the mix: “We are humus, not Homo, not anthropos” (55).

also illustrate complexities inherent in attempts at decentring the human and envisaging new paradigms for thought and behaviour. In regard to *The Ice*, we discuss how the function of polar bears, restricted to representing primal emotions and victimhood, productively aligns with the near future perspective employed. *Always North* depicts corrupted science dividing humans and other-than-humans in the 2025 timeline and then rejoining the two in 2045. Both processes uncomfortably reflect the human need for and exploitation of concrete entanglements. Our reading of *Blackfish City*, finally, focuses on depictions of a both material and metaphysical connection between animals and humans that can be read as a comment on a harmful severing of ties between humans and nature in the past. Entanglements thus find different forms depending on the level of speculation in the works, but they all demonstrate engagement with the detrimental centrality of the human in both past and future paradigms.

2. Future Climates in Future Places

While depictions of changing climate also appear in works that are more readily (if oxymoronically) categorised as realist fiction, climatological instabilities are illustrated especially effectively in speculative fiction: fires, floods, droughts, and global freezing become agents on par with characters when the destruction we see beginning around us in real life is extrapolated. With current attention focused on the polar areas, which “function as symbolic canaries in the mine of climate change” (Bracke, *Climate Crisis* 106), it is also clear that while melting glaciers and starving fauna may influence onlookers’ emotions rather than their everyday lives, warmer temperatures will have global consequences in a longer perspective: Arctic melt will become a concern for people living at a distance from the world’s far north as well. The coupling of the Arctic with climate change was already established in the 19th century, especially following 1816, the year without a summer, when fears of a cooling world oscillated between being attached to the uncontrollable northern ice and the less comfortable acknowledgement of local practices that changed microclimates.⁴ Siobhan Carroll remarks that this debate constitutes “an uncanny reflection of our own struggles to discern the nature of, and decide on the proper response to, alterations in the global climate” (225). Speculative responses to real-world ideas of artificially changing the Arctic climate – in turn harkening back to hypotheses about an open polar sea – are present in such works as Mark Twain’s *The American Claimant* (1892), in which the controlling of sunspots is expected to reverse climate zones with the end result that “the entire Arctic Circle [will be] in the market as a summer resort next year” (272). Geoengineering is also featured in Jules Verne’s *Sans dessus dessous* (1889, translated as *The Purchase of the North Pole*), in which the idea is to tilt the

⁴ The year without a summer followed the eruption of Mount Tambora in Indonesia in 1815. In addition to devastating Sumbawa Island and causing great loss of life in the nearby areas, volcanic ash in the atmosphere also had global ramifications with heavy rainfalls, cold temperatures, and associated effects, such as failing crops. In his analyses of administrative, political, and fictional narratives that responded to the eruption in various ways, David Higgins demonstrates how this, “and other such catastrophes, are productively understood as processes in which the material and the discursive are intertwined” (2).

axis of the globe, thereby putting an end to the changing seasons and moving the Arctic southward. The resultant thawing would allow access to the coal deposits under the ice. In his reading of the novels, Steve Asselin notes that “anthropogenic climate change is not the inadvertent effect of capitalistic ventures but the very goal of such enterprises” (443). Although the plans in both novels come to naught, the climate is depicted as a commodity and the Arctic ice as an obstacle to progress.

Anthropogenic climate change replaces geoengineering in contemporary speculative climate fiction, but differing perceptions of the consequences of the melting northern polar ice cap still find their way into the works, functioning to identify the loci of agency and to establish the antagonists. In Paull’s *The Ice*, the newly opened “TransPolar Route” (3) through the ice-free Arctic waters has enabled faster trading – a development that underscores the area’s heightened global economic importance but also introduces tensions between legal and illegal practices. The novel’s protagonist, Sean Cawson, is a businessman who, together with his friend Tom Harding and a shady benefactor, has built Midgard Lodge, a retreat in an isolated Svalbard bay. On the surface, the retreat serves as an exclusive destination for environmentally-minded visitors who come to see the “fragile, sublime, vulnerable environment” before it is lost (70). However, it hides a small military unit that enables the running of illegal goods and weapons through the Arctic. An inquest into the death of the die-hard environmentalist Tom structures the plot and brings the competing functions of the melting ice into focus.

Tourists flock to Svalbard to see the vulnerable Arctic while it can still offer immediate experiences thought to be unreachable elsewhere and, while less troubling than the gunrunning, there is a pronounced business side to this practice as well. “They were rich, they were ready, they were ravenous for bear”, the first sentence of the novel reads. It describes passengers aboard a luxury cruiser off the coast of Svalbard, who “still believed in the natural law that wealth meant entitlement” (1). They expect “sparkling ice [and] sightings of live ice-obligate mammals”, with the apex predator as the main prize (1); their money is expected to raise them above the effects of climate change. However, catching sight of this ideal Arctic setting and polar bears is complicated precisely by the warming temperatures and the increased access to the Arctic. A persistent drizzle makes the passengers stay in the common room and watch footage filmed by previous tourists, while the heavy boat traffic in the fjords keeps the bears at a distance. When a photo opportunity at last presents itself, with a large bear appearing on a glacier close to the cruiser and looking straight at the passengers, they experience what they have come for. For a short moment, the Arctic is what they have envisaged: cold, clear, and inhabited by a creature whose stare gives them the desired “euphoric jolt of fear” (5). The bear’s pelt shines white, which the passengers feel is in keeping with how things should be, but the omniscient narration clarifies that it appears white because of the “greyish tinge” of the snow; when the bear was young and “the snow fell clean and white”, its pelt showed as “pale yellow” (4). In this way, pollution contributes to creating a perfect photo-op, which serves as the starting point for further interrogations of environmental concerns. Human corruption infiltrates and affects a vulnerable place: Svalbard snow, greying over a couple of decades, becomes a local symbol of the longer history of anthropogenic impact on the planet.

This wider perspective is incorporated in the novel via references to the flooded Maldives, European ski resorts with no snow, and Saharan desert dust covering London, and it raises questions about global responsibility. Linkages between biosystems are also foregrounded in connection with Tom's death. A calving iceberg has dislodged his body from a cave (an event that is incidentally also caught on film by the up-to-this-point enthused tourists), and at the inquest, a scientist forcefully argues that all lives on the planet are "in a burning building together" and the ice-cave collapsing around Tom is "a direct consequence of climate change" (260). Human impact on the planet makes the more-than-human react, and the threatened ice becomes particularly agentic – early in the novel, the calving is described as "a tiny stitch in a larger pattern ... [an] apparently synchronised new behaviour of the ice" (11). In Paull's future, which is described on the novel's dust jacket as "the day after tomorrow", the real-world destabilisation of climate and ecosystems is slightly exaggerated, providing the foundation for the tensions between those who press on for monetary or experiential reasons and those who want to protect the Arctic. As Tom tells potential investors in the lodge, "You can only lose it once" (Paull 70). The Arctic is thus depicted as being at the cusp of an irreparable change, but the atonement Sean seeks throughout the narrative gestures towards a slightly more hopeful future, a chance to avoid the moment separating before from after.

Such a moment is often concentrated in postapocalyptic novels, reflecting Haraway's preference for considering "the Anthropocene [as] a boundary event [rather] than an epoch", an event that "marks severe discontinuities; what comes after will not be like what came before" (100). On the first page of Jarrett's *Always North*, and distinct from the narrative proper, there is a description of a terrible sound emanating from the north, which "cleav[es] this moment from everything that went before" and creates a present suspended between what is known and "this new thing, this irredeemable thing" (1). This moment is later contextualised in the journal of the protagonist, Isobel, or Izzy. As a seismologist, she is sent to the Arctic in 2025 by a company looking for the last oil reserves on the planet. Thus, the survey team's infractions in the ocean bed are the last of their kind in a long history of resource extraction. Their ship, *Polar Horizon*, has lost all communication with the icebreaker that precedes it and is forced to turn back, as enormous amounts of pack ice are flowing rapidly in the wrong direction. The sound – now described in terms that unequivocally establish it as a signal of the end of the world, "Not a bang or a whimper" – becomes intimately connected to linear time. There is "a rending, a tearing of this time, this now from everything that will follow – the infliction of a wound that can never heal" (108). The sound comes from the Arctic that is breaking, and with it, the world. The event in *Always North* thus represents the more-than-human environment's final reaction to the long history of anthropogenic thought and action.

This radical destruction negates any possibility of reassuming environmental responsibility, and its global ramifications are depicted in the dystopia of 2045. Survivors of flooding, fires, and diseases are eking out an existence in elevated towns – "What will happen", Izzy wonders, "when we run out of up?" (136) – and in great camps spreading out around them. Previous power structures have been dismantled, communications have broken down, and human life, which is in focus, has become violent and unsafe. In this

temporality, Jarrett relocates the action to Scotland, which reflects a tendency in climate fiction to depict the effects of climatological catastrophes on sites with which the reader is familiar, if only through representations. As Trexler notes, “polar novels always struggle to connect change to more familiar and affective places” (82). Although the starkness of the Arctic initially makes Izzy see it as “a vital piece of the engine that drives the world along” (Jarrett 15), suggesting that human infractions, therefore, are likely to have global consequences, the devastated landscape of Aviemore in the Scottish Highlands as well as references to the destruction of well-known landmarks across the globe – among them London’s Canary Wharf and Dubai’s Burj Khalifa (259, 260) – seemingly become more effective in depicting concrete destruction than the stereotypically empty northern periphery.⁵ The sound in the north is substituted with concrete imagery of the collapse: climate change becomes visible to a greater extent south of the Arctic.

Human agency in Jarrett’s bleak futures thus results in landscapes that are progressively more hostile, and although there is no textual return to the Arctic, the global collapse radiating from the area likely renders it uninhabitable as well. In contrast, Miller’s *Blackfish City* belongs to a body of climate fiction in which the Arctic functions as the last outpost and is or becomes a permanent home for the characters.⁶ In the far future depicted in the novel, climate change is a potent background for the formation of a new Arctic, and the responsibility for the global destruction is thus placed in the hands of past governments and behaviours. Decades before the starting point of the narrative, soaring temperatures have led to conflicts over inhabitable land and collapsed nations and cultures south of the Arctic, which are now referred to as “the Sunken World” (Miller 10). Along with the attendant cultural and economic changes creating new power nexuses, the Arctic has moved from the periphery to the centre in a process that started with the resource extraction enabled by the glacial melting and ended with the construction of Qaanaaq, a new city floating “East of Greenland, north of Iceland” (5).⁷ When seen as an extended refugee camp, Qaanaaq becomes a microcosm of the past world, gesturing towards new forms of stewardship and accountability. Although the city was initially constructed as a perfect ecosystem, in the novel’s present it is crumbling under corrupt systems and lawlessness, and the inhabitants are segregated into wealthy and poor areas in the arms growing out of the central hub. The refugees’ home cultures are replicated on a small scale – a houseboat’s interior “could still be Cambodia” (215) – and people from the rich southern arms come to witness the “desperation or rage” of the poorer arms as tourists (10). In this way, irreversible climate change and the chaos that followed have necessitated

⁵ Aside from the ship leaving from and returning to Svalbard, the 2025 timeline is set on the Arctic Ocean, where the victims of the disrupted nature are animals: “each in their own *savssat*, singing their own songs of death, there’s whale, seal, walrus. Everything that could live here is dying” (234, original italics).

⁶ Among the other contemporary examples are Marcel Theroux’s *Far North* (2009), Tobias Buckell’s *Arctic Rising* (2012), and Julie Bertagna’s *Savage Earth* trilogy (2006–2011), which is targeted at a young adult readership.

⁷ The name of the city connects to the history of appropriation in the Arctic, specifically to the events of 1953, when the Inuit inhabiting the real-world West Greenland villages of Pituffik and Dundas were forcibly relocated to a new constructed village to give room for the construction of the American Thule Air Base. This real-world Qaanaaq has in the past of the novel “just been swallowed up by the sea” (44).

the building of a new world, and around Qaanaaq, the ice continues to melt. However, since the novel's focus is on the reunification of a family and on re-strengthened bonds between humans and other-than-humans, it gestures towards a future in which distributed responsibility still gives an inkling of hope, and stories and memories are central to avoiding the repetition of past mistakes. People fleeing their home nations for Qaanaaq have "brought their ghosts with them. Soil and stories and stones from homelands swallowed up by the sea" (8). With these stories come both the good and the bad of the past cultures, and there is also a "need [for] new ones" (31). The call for new stories comes from an underground broadcast called *City Without a Map* – "An elliptical, incongruent guidebook" (5) – told in different languages and voices. As well as effectively highlighting the multicultural make-up of the city, *City Without a Map* also works to incite protest and revolt, calling for a future in which all agents are accountable.

The radically redrawn map of the world and the invention of a city which in our real world is a location in the Arctic uninhabited by humans may risk decentring the issues related to climate change. As Trexler's analysis of other polar novels suggests, both the Arctic setting and a wholly imaginary city may present "global warming [as] more remote" (82). But *Blackfish City* draws out the implications of real-world instabilities and exemplifies what Ursula Heise terms "deterritorialization", a resistance to previous spatial-political hegemonies which "implies possibilities for new cultural encounters and a broadening of horizons" (*Sense of Place* 10) that may "become the basis for cosmopolitan forms of awareness and community, both ecologically and culturally" (210). Deterritorialization is commonly, and as Heise points out "especially when it is imposed from outside" (10), seen as detrimental to the fostering of responsibility for both local and global processes.⁸ However, like the novels and films Heise addresses, Miller's speculative fiction underlines how the destruction of previous places, nations, and cultures leads to emphasising interdependence and interconnectivity in the building of a better world.

3. Entangled Bears

Speculative fiction's unique affordances for imagining more-than-human entanglements are foregrounded in several recent publications that also attest to cultural inflections. Dunja M. Mohr uses Heise's call for "multispecies justice" in her analyses of contemporary Canadian fictions – among them Margaret Atwoods' MaddAddam-trilogy (2003–2013) and Larissa Lai's *Salt Fish Girl* (2002) – and demonstrates how the "perforation of species boundaries renders the human-inhuman divide obsolete and provides a speculative foil to rethink human singularity and social justice along a

⁸ Heise draws on multiple theories to distil her view of cosmopolitanism as "a shorthand for a cultural and political understanding that allows individuals to think beyond the boundaries of their own cultures, ethnicities, or nations to a range of other sociocultural frameworks" (*Sense of Place* 60) and further enlarges it to include environmental concerns.

pluralistic bioform continuum” (61).⁹ Sanchar Sarkar and Swarnalatha Rangarajan make Jane Bennett’s notion of the affective quality of vibrant matter a starting point for their explorations of the forms of embodied entanglements of marine life, Nigerian culture, and contamination in Nnedi Okorafor’s *Lagoon* (2014).¹⁰ Speculative environmental fiction (or “eco-speculation”), in their reading, crucially contributes to the “rethinking [of] tropical materialisms” (183). Addressing South African author Charlie Human’s *Apocalypse Now Now* (2013) and *Kill Baxter* (2014), Olivier Moreillon and Alan Muller interpret Sarah Nuttall’s political formulation of entanglements as a form of spatio-temporal “intimacy”, however “resisted, or ignored, or uninvited” it may be in the post-apartheid social and economic structures (Nuttall 1). Moreillon and Muller conclude that the “non-realist potential” of speculative fiction enables Human, in these two novels, to re-entangle previously separated “spaces, histories, and mythologies” in the projection of a more promising future (94).¹¹ To these examples, we now add particular Arctic entanglements.

Considering media representations of the melting Arctic, it is hardly surprising that all three novels in our study feature representations of polar bears and what Alaimo refers to as a “literal contact zone between human corporeality and more-than-human nature” (2). Again, because of the varying levels of speculation in the works, the “ethical and political possibilities” that emerge in the contact zone (2) carry different implications. Paull gestures towards a slow realisation of the deep history of entanglements, whereas Miller and Jarrett explicitly engage with “the constitution of the category of the human” (143) and her place in various networks. However, the dismantling of hierarchies inherent in the notion of the more-than-human is a complex process in both theory and fiction. While both *Blackfish City* and *Always North* foreground the necessity of connections between humans and other-than-humans across time and space and use the imaginative space of speculative fiction to literalise these, human needs and perspectives continue to be privileged.

While climate change enables a brief contact between the photographing cruise passengers and the bear in Paull’s novel, the humans prefer not to see the predator as entangled with their own lives, but instead view it as a living, moving, but temporary connotation to the primal emotions that are perceived to be lost in the modern world. Even characters on less temporary visits to the Arctic perceive polar bears in this way but eschew any ethical consequences that can follow from their one-sided view. When Sean returns to Svalbard after Tom’s death and embarks on a solitary canoe trip in the waters he knows very well, he becomes aware that a large polar bear is tracking his movements. Sean

⁹ Heise’s notion in itself cautions against blanket definitions of “ethically responsible relationship[s]” between cultures and between these cultures’ understandings of “species and kinship boundaries” (*Imagining Extinction* 200).

¹⁰ See Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Duke UP, 2010.

¹¹ Two recent anthologies illustrate that entanglements can also be used to explore surreal speculative fictions’ ways of illustrating how entangled lifeforms navigate an increasingly defamiliarised landscape and how human and non-human nature are entangled via gendered, racial, and economic ideologies. See Louise Economides and Laura Shackelford (eds.), *Surreal Entanglements; Essays on Jeff VanderMeer’s Fiction* (2021), and Sladja Blazan (ed.), *Haunted Nature: Entanglements of the Human and the Nonhuman* (2021) respectively.

ascribes several human emotions to the bear: cynicism, premeditation, and manipulation. It is “willing [Sean] to panic and make a mistake” (Paull 51). But when the animal is driven off by approaching motorboats, the encounter mainly makes Sean “feel more alive than he had done in years” (52). Upon his return to London, a primitive sexuality re-awakened, he has sex with his partner. With wine poured over their bodies, the aftermath sees “the white sheets soaked red around them, like a kill” (58). The tourists and Sean alike take from the contact zone a new appreciation for life, which has little to do with the precarious situation of the wild predator but is rather intimately tied to stereotypical representations.

Other references to polar bears in *The Ice* are more explicitly linked to the myriad instabilities that result from accelerated climate change. A dead polar bear found in Svalbard, for example, is tattooed with a symbol showing it has come from East Greenland and traversed an immense distance. It is thought that the bear has either come “around the North Pole clockwise, or the polar currents are already so disrupted by climate change that it came counter-clockwise” (271). This dead bear cannot be untangled from the trans-corporeal networks as easily as the camera-friendly bear: its death raises ethical questions related to the past, present, and future responsibility for the planet. With its only slight temporal shift, *The Ice* thus restricts the great predator to two real-world functions: it is a reminder of the powers of the supposedly uncorrupted nature, distinct from human culture, and, effectively, it is a victim of anthropogenic impact. However, both functions underline the flaws and complexities of human behaviour and action, and they slot into the novel’s overarching emphasis on the detrimental effects of seeing the human and the other-than-human as distinct.

In Jarrett’s novel, an environmental protester dressed as a polar bear, who hopes to hinder further commercial ventures in the Arctic of 2025, carries a placard that reads: “*Homeless, please help*” (21, original italics). Together with Izzy’s childhood memories of an apathetic female polar bear at a zoo, the protester’s actions and message highlight how the species has been displaced or relocated by humans, and while these instances may not illustrate the ethical possibilities of meetings in the contact zone, they at least point to the ethical consequences of such meetings. When Izzy first sights a wild bear in the Arctic, she expects the encounter to be “a privilege”, since so few specimens remain, but she is instead deeply unsettled by it: “The bear is terrible in his whiteness” (54).¹² Encountering it in its natural habitat highlights that Izzy and the crew have moved into a territory where they do not belong. She thinks: “I doubt he will forgive us our trespasses” (55). The bear inspires awe also because of its impossible life span: the captain on *Polar Horizon* recognises it from an attack several decades previously, an act that is repeated as the predator comes aboard the ship while the crew still reels from the sound of the breaking Arctic. Together with the swiftly moving ice, the polar bear in this timeline is agentic and has human-like intentions ascribed to it: it reacts to incursions into its domain, seemingly intent on vengeance and deterrence.

¹² This formulation and repetition of the phrase “*Call me Isobel*” (e.g., 152) link the novel to Herman Melville’s *Moby Dick* (1851), with the commercial interests of humanity replacing Ahab’s monomaniacal quest for the whale.

Izzy is both figuratively and materially entangled with this specific bear and polar bears generally. Already from the start of her Arctic journey, she has experienced moments of “disassociation” (99), exhibited animal characteristics during lovemaking, and had dreams filled with “ice and teeth” (78). When the bear is captured post-attack, it is confined to the deck above Izzy’s and often settles directly above her bunk. The concrete similarity between their postures – “His shape mirroring mine” – is reflected in less tangible correspondences: “Our dreams drifting down like snow and settling in stratified layers” (234).

These entanglements find an uncomfortable concretisation in the 2045 timeline, when scientists are trying to find ways to return to and prevent the moment of the ecological collapse. Experiments are built around the hypothesis that bears and other animals have no sense of or use for linear time. “Everything is now. Everything that happened, is happening, will happen, is always happening” (245–246). This idea links figuratively to the ongoing temporal entanglements of Haraway’s unfinished *Chthulucene*, which is made up of “stories and practices of becoming-with in times that remain at stake” and where nothing is “confined to a vanished past” (55), but the novel diverges from this by distinguishing between humans and other-than-human bears. With Izzy’s journal – the sections of the novel set in 2025 – as the starting point, the scientists develop an idea to meld human and animal minds in order to isolate the precise moment when a reversal is still possible.¹³ The same bear Izzy encountered in the Arctic has been cryogenically suspended and experimented on through the years. The stimulation of a range of responses is designed to “forge a connection” (Jarrett 249) that will enable humans to “change the past” (249). The bear’s brain has been materially connected to those of members of *Polar Horizon*’s crew without a successful outcome. Izzy, whose brain scans have revealed her as eminently suited to meld with the bear but also highly vulnerable to damage, decides to make a final attempt at achieving the “temporal transfer” (305) at the very end of the novel, when the world is literally burning around her. She climbs onto the table and arranges the bear’s limbs around her, mimicking the sleeping postures they had aboard the ship but no longer being separated by a deck. “We stay where we are, where we were, where we never were and will always be, curled together, spines nestled one within the other, floating on a frozen sea” (308). Although this description may seem to signal a form of equilibrium, and the potential effects of the experiment are indicated to be beneficial to all life, human desires and desperation lie at the root of both past and future corrupted science, and the physical and psychological proximity to the bear is born from human needs. Jarret’s distorted material entanglements thus play a central role in the dystopias she depicts in near and far futures.

Science plays a questionable role also in *Blackfish City*, but it leads to results that can, on some levels, be read as more hopeful. The narrative indicates that in the past, experiments had been carried out on indigenous Arctic communities, and nanites introduced into the bloodstream enabled humans to form exceedingly strong physical and psychological bonds with

¹³ As Octavia Cade remarks in her review of *Always North*, a certain amount of “handwavium of quantum physics and mind mapping” is required to justify and explain the scientific process, but hypothesised differences between animal and human conceptions of time are introduced early in the novel.

animals. The Inuit family in focus in the novel were all nano-bonded to animals as children, a process where “community need and availability” determined the choice of species (Miller 228), and a powerful link to the ancestors ensured that the process did not completely obliterate human identities and result in madness. This link with the past is not represented as unique to Inuit and other indigenous peoples; rather, it is represented as something “the Western world had lost sight of, a lesson they forgot but we relearned” (144). The almost symbiotic relationship between human and animal points to a web of entanglements that promises redistributed responsibility for the present and future. However, the process was also seen as demonic, or a sign of political conspiracy, prompting acts of violence that are later labelled “nanobonder genocide” (183). Just such an act of violence fractured the Inuit family in the past: when one of the mothers, Masaaraq, returns to her community after a hunting trip, most of its human and other-than-human members have been killed and her wife and children are gone.

The nano-bonding experiments follow on the global collapse of ecosystems, which invites reading them as a reaction to an injurious and longstanding separation between humans and nature. Together, human and animal become “Something that behave[s] completely differently” (187), a being that is more than the sum of its parts. The symbiosis is fragile, however, and breaking the bond has dire consequences. At the beginning of the novel, Masaaraq arrives in Qaanaaq, the final destination on her quest for her family, with an orca swimming beside her boat and a “polar bear ... in chains” on the deck (2). The chained bear is bonded to Masaaraq’s son Kaev, and the long separation has had consequences for both: Kaev suffers from physical and mental tics, and the bear, uncontrollable in its fully animal state, is kept restrained or caged. When the polar bear and Kaev are finally reunited, the latter feels stabilised and whole once more. Together, they become “One thing, one organism. Acting in concert in ways that had nothing to do with language, planning, rational thought” (132). The reunification of the family thus works in tandem with the re-establishment of both physical and psychological ties.

While this theme seems to literalise the ideas of multispecies equality and kinship, Miller points to the complexities of entanglements and to the difficulty of deprivileging the human. This is particularly clear in the case of the polar bear, used by both Masaaraq and Kaev for purposes of protection and violence and, because of the strong link with Kaev, in part ruled by his jumbled emotions. At the end of the novel, the bear’s memories of years in chains and the “glorious moments of being unleashed, when [Masaaraq] was in peril” compete with Kaev’s assessment of the past: “*She was trying to bring you to me*” (317, original italics). In this situation, Kaev’s own emotions are in turmoil, and he lacks the calm that could influence the bear. Instead, the two meld to the point of Kaev seeing his own hands as “huge, thick with white fur, capped with long black blade-claws”, poised to descend on Masaaraq’s prone body (318). As an unavoidable response, Atkornatok, the killer whale to whom Massaraq is bonded, defends her human “Other” (228) and drags the dead body of the bear into the sea. While nano-bonding radically fuses the human and other-than-human and can help prevent further environmental destruction, it is thus simultaneously a process that puts everything at risk. Marie Stern-Peltz argues that it at once illustrates “the potential power of an extreme form of vulnerability” and imagines “a form of community which goes beyond the

human, where the risk to animals and the natural world cannot be as easily ignored as it is today”. Becoming something that transcends both human and animal highlights how separations between these categories limit new ways of understanding and changing processes in the world, but there is also the ever-present risk of losing individuality, which is needed to actually effect change.

4. Conclusion

To the paradoxical environmental processes mentioned at the beginning of this article, in which the Arctic is at once distant and central, a third process can be added: one that incongruously sees the accelerated warming of the Arctic and polar bears as conceptually opposed. In their examinations of the persistent denial of climate change, Anna Westerstahl Stenport and Richard Vachula note that although the starving polar bear is the foremost emblem and an affective carrier of connotations of accelerated change, it competes with the traditional representation of the Arctic, which is still upheld in media. They argue that this clash results in a view that “anthropogenic climate change, most evident in the Arctic, can be still purportedly refuted, as the perception of that region is one as frozen and unchanging for eternity” (284). This perception of the Arctic seems to have extraordinary staying power, despite ample evidence that it must change if ramifications of climate change are to be adequately dealt with. The speculative fictions we have addressed in this article highlight the vulnerabilities of the vast area and replace the perceived immutability with images of rapid and profound change. The Arctic that Paull depicts is only incrementally removed from contemporary conditions, with speculation residing in the polar ice melting slightly ahead of predictions. The fragile environment becomes a backdrop for conflicting interests, with the characters representing attitudes that mirror real-world climate anxiety. The dystopic tendencies in Jarrett’s novel are produced by humanity pressing on despite signs that the Arctic is on the cusp of destruction, reflecting a lack of ethics in processes of violent resource extraction and a disregard for the connections between ecosystems. In Miller’s far future, the map of the world has been significantly re-drawn and the Arctic figures as one of few places that are still liveable. In this new construction of the Arctic, the microcosm of Qaanaaq illustrates the consequences of displacements caused by a global environmental collapse. In various ways, the authors thus maintain a dynamic connection to the real-world Arctic and extrapolate on the effects of contemporary climate change, while simultaneously adding needed speculative visions to the networks of meaning surrounding the Arctic.

Haraway states that, when attempting to think-with others, “it matters what stories tell stories” (39), and speculative fiction can enable committed questioning of paradigms relayed elsewhere. However, envisioning interconnected networks in which the human and the other-than-human participate on equal terms against the backdrop of climate change is still a complicated process, and even widely speculative novels struggle to decentralise the human in productive ways. Heise argues that climate fiction, “requires the articulation of connections between events at vastly different scales” (*Sense of Place* 205), and Trexler notes that “the character-driven novel” engaging with anthropogenic change needs to make room for “wider groups of

human beings, plants and animal species, geophysical events, weather, and technology” (74). The novels analysed in this article tell different stories about entanglements, ranging from an acknowledgement of the human as a node in a network to dystopic representations of violent and exploitative material connections. Yet, although these stories reflect aspects of the kinds of thoroughgoing, more-than-human entanglements and multispecies coexistence Alaimo and Haraway call for, the tensions of anthropocentrism remain: the human is not fully dislodged from her privileged position in any of the texts, and perhaps a complete dislocation is not the point. In Paull’s novel, given its proximity to real-world discourses, human interaction with the bears illustrates contemporary commodification of the Arctic, and the agency of polar ice is just beginning to be noticed. Jarrett and Miller depict far more radical interconnections but, respectively, privilege human needs and perspectives. In *Always North*, the attempt to meld the minds of a human and a bear is yet another sign of corrupt ethics, and although *Blackfish City* is more hopeful about human-animal coexistence, it upholds a somewhat stereotypical division between human rationality and animal instinct. Still, even when distorted or risky, entanglements can work as reminders of how extended lateral networks are needed to build or recreate a more hopeful future.

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