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# The Okjökull Memorial and Geohuman Relations

**Abstract:** Focusing on the life and death of Okjökull, the first of Iceland's major glaciers to disappear because of anthropogenic climate change, this article discusses the complex relationships between cryospheres and human communities in Iceland. It asks how distinctions between non-living entities and living beings can offer insights to anthropology, and transdisciplinarily, as a model for recognising mutual precarities between the living and non-living world in the face of anthropogenic climate change. Detailing the authors' ethnographic encounters with Ok mountain and Okjökull (glacier), the authors argue that by attending to non-living forms, and by registering their 'passing' or loss, we are able to document and better comprehend threshold events in the larger life of the planet.

**Keywords:** affect, Arctic glacier, grief, Iceland, living/non-living, more-than-human, public anthropology

Iceland is a country of stories, and of books. Its literary tradition dates to the thirteenth-century sagas and extends into the present, with reports indicating that one in ten Icelanders will write and publish a book in their lifetime. No author is more renowned in the country, or outside of it, than the novelist Halldór Laxness, who was awarded the 1955 Nobel Prize for Literature. Laxness was fascinated with proclivities and dispositions that he saw as uniquely Icelandic: oddly intimate engagements among each other and with the pitiless weather and obdurate terrain of their cold northern island. In his 1968 book, *Under the Glacier*,<sup>1</sup> Laxness revisits another author's take on his homeland when he invokes the route taken by Jules Verne's protagonists in *Journey to the Centre of the Earth* (1864). In that nineteenth-century novel, a group of scientist-adventurers – and their Icelandic guide who is painted as little more than a beast of burden – descend into the maw of Snæfellsjökull (Snow Mountain glacier). Beginning atop this extinct volcano, the troupe aims ultimately to find the hollow core of the earth. They do not make it. And that is part of what fascinated Laxness in *Under the Glacier*: those that go into the glacier, never to return.

Laxness's gift of enigmatic writing is both spellbinding and wryly humorous. He offers grand reflections in the person of humble, pastoral heroes. In *Under the Glacier*, the plot rotates around a key moment of suspense: who or what resides in a casket that has been buried in the glacier without last rites? The question lingers; but it also opens a series of philosophical gates and passages. Thinking aloud with premonitory vision, a key character offers, 'It is often said of people with second sight that their soul leaves



the body.’ However, they continue, ‘That doesn’t happen to the glacier. [When] one looks at it, the body has left the glacier, and nothing remains except the soul clad in air . . . Then it’s as if the mountain is no longer taking part in the history of geology.’ It is as though the mountain has become its own metaphysical force, a place with powers that escape the metrics of geology and theology in burial. For Pastor Jón, the clerical guide of the narrative, the glacier evokes a profound sense of the uncanny. He says: ‘I am always trying to forget words. That is why I contemplate the lilies of the fields, but in particular, the glacier. If one looks at the glacier for long enough, words cease to have any meaning on God’s earth.’

In *Under the Glacier*, we find odd moments of resurrection and awe as well as an attunement to what we might call the geohuman – moments of contact and relationship, recognition and transformation, between human communities and the earth system. Geohumanism is, in many ways, a very old tradition in Iceland. The oldest known text about Snæfellsjökull is the thirteenth-century *Bardar Saga*, which tells the tale of a half-giant hero, Bardar Snæfellsáss, who ends up forsaking human society and retreating into the glacier. He later reappears as a protective earth spirit for the region, helping humans and conveying wisdom. The last three letters of Bardar’s surname represent the singular form of *aesir*, the old Norse term for the gods. To this day, the Snæfellsnes peninsula is widely regarded as a place of strange and mysterious energies.

## To Live among the Glaciers

Iceland’s glaciers have forever been a central feature of the country’s landscape. Over time, they have literally shaped the topography of the island, etching themselves across terrain, carving valleys and contouring mountains into form. Iceland’s 400+ glaciers and 130 volcanoes have come to represent a kind of geologically inflected national character for the country, captured in the appellation ‘the land of fire and ice’. Today, the retreat of glaciers can be seen everywhere across Iceland for those who are willing to look. As anthropologists, we became interested in what we call ‘the social life of ice’ across this island on the edge of the Arctic Circle (Howe 2019b). In particular, we wanted to know how the relationship between people and the bodies of ice that they have called neighbours for the last twelve hundred years might be changing. We found that glaciers have not always been celebrated in Iceland. Instead, they have been a source of fear: a looming, destructive and uncontrollable embodiment of nature’s force. Icelanders who have lived in proximity to glaciers have seen their farms washed away and their homes destroyed by glacial outburst floods (*jökulhlaups*). And they remember the stories of people and animals washed far out into the frigid waters of the North Atlantic (Howe 2022). In the nineteenth century, glaciers slowly came to be redefined as valued features of Icelandic nature. In the twentieth century, adventurous Icelanders began trekking into glacial environments for both recreation and scientific exploration. However, with the Arctic region now warming at up to four times the global rate, the preservation of the country’s glaciers seems increasingly impossible.<sup>2</sup> Thus, in the twenty-first century, the meaning of glaciers in Iceland appears to be changing again. Where they were once fearsome forces threatening human life on the

island, glaciers are now seen as themselves vulnerable to human impact. Transformed by the steady pulse of anthropogenic warming, encounters with ice that were once grounded in trepidation are now recentred on care and protection.

In this article, we follow the life and death of Okjökull, the first of Iceland's major glaciers to disappear because of anthropogenic climate change. Although the glacier was declared by glaciologists to be 'deceased' in 2014, the announcement of its death attracted little interest either in Iceland or internationally. In our anthropological work in Iceland, we have seen that this sort of ambivalence is owed to the complex relationship Icelanders have had to their glaciers historically. It is only very recently that Icelanders have come to think about glaciers as vulnerable natural bodies in need of human care rather than as mortal dangers. But the obscurity of Okjökull's demise, we believe, also has to do with a relative lack of human engagement with Ok mountain specifically, either in person or in story. And this we found to be fascinating anthropologically: what qualities must a landscape or other non-living entity (like a glacier) demonstrate in order for a larger human population to recognise a shared precarity with other living things? Here, we discuss our ethnographic encounters<sup>3</sup> with Ok mountain, and with Okjökull, the glacier that sat on its shoulder but now exists only in patches of 'remnant ice'. The experiences we convey are deeply informed by our years of research with different sectors of the Icelandic population, but here we focus explicit attention on the non-living inhabitants of the island, in this case, a mountain and its glacier. For us, the 'passing' of a major (if small) named glacier in Iceland was a threshold event in the larger life of the planet and, in the context of the climate crisis, became an important story to tell.

In our efforts to bring Okjökull's story to a wider audience, we have been engaging with what are being called 'multimodal' methods (Boyer et al 2016; Campbell 2011; Tsai et al 2016) – those that utilise art forms, audio, visual and experimental media to uncover ethnographic data and to engage genres that can convey results and analyses more widely. In our case, we turned to a modified form of documentary film to elicit Okjökull's story, working together with Icelandic collaborators to create an experimental visual ethnography. As we engaged with multimodal methods, we began to envision our research in new ways, including prioritising narrative form. The use of film as a public-facing medium impacted our analytic interests and encouraged us to learn how to communicate our research findings to a non-academic audience. In the course of making the film, we were also led toward another multimodal experiment: the creation of the world's first glacier memorial. That installation and event (to our great surprise) attracted journalistic attention from around the world for several months over the course of the summer of 2019. In our subsequent interpretation of the global outpouring of affect for Okjökull and its memorial, we have been drawn to the growing salience of geohuman relationships and have deepened our comparative interest in sentient landscapes. Through these ethnographic and multimodal encounters, the importance of new rituals is surfaced: whether for the icy death of a glacier or as a way to create global communities of care and concern in an effort to undo the Anthropocene trajectory (Escobar 2020).

Our argument here unfolds across three moves. First, we suggest that engaging with multimodal approaches opens new avenues for analysis and representation of

geohuman dynamics; second, through such practices of response and recognition, we argue, forms of geohuman care and attention are surfaced; and finally, we propose that in the Anthropocene context, it is critical to acknowledge the continuum between sentient lives and inanimate entities, and to draw collective attention to the fact that all biotic life is both imperilled by the non-living world as well as entirely dependent on it.

## Ethnography on Ice

Social scientists have long explored how ice and human populations have interacted. Franz Boas, often called the ‘father’ of American anthropology, created detailed studies of Inuit people’s relationship to ice in the late nineteenth century (Boas 1888). More recently, anthropologists and others have been chronicling Indigenous people’s experiences with climate change in Arctic zones and among those who live near glaciers and ice-covered peaks (Crate and Nuttall 2009; Marino 2015; Rhoades et al 2008). In each, there are deep concerns about retreating ice among First Nations peoples and subsistence hunters who rely on seasonal freezing and ice pack for their livelihoods. Responses to melting cryospheres, however, are not singularly negative. Some Greenlanders have embraced ice reduction because it will increase access to mineral and hydrocarbon resources (Nuttall 2015). Several Icelandic politicians have likewise celebrated the possible economic windfall of the great melting, arguing that warmer conditions represent a boon for northern nations because this will make agriculture and resource extraction more practical and economically viable. Given the rapidity of climate-induced melting and its resulting impacts, it is important to understand the varied effects of cryospheric diminishment in the frozen places where ice has conditioned terrains, shaped lives and mediated encounters with land, resources and livelihoods (Gagné 2019).

Our work in Iceland has drawn inspiration from work in the human sciences about climate change, environmental conditions and adaptation to what is now being called ‘the Anthropocene’ (Barnes et al 2013; Boyer 2019; Chakrabarty 2009; Howe 2019a). Although the term ‘Anthropocene’ has generated controversy because it can be interpreted as papering over the global North’s far greater accountability for industrial emissions (a point that we agree with), it is undeniable that anthropogenic impacts on Earth systems are showing themselves everywhere. Industry, security programmes, markets and infrastructures are all implicated in, and attempting to adapt to, unprecedented environmental change. Climate models demonstrate that weather events will become more destructive in the future (Edwards 2010), and the latest report from the UN’s Intergovernmental Panel on Climate Change (IPCC 2021) warns, in unparsed terms, that climate-related disasters are ‘locked in’ for the next three decades, even if greenhouse gas emissions were to cease immediately. As Timothy Morton (2014: 126) has put it, ‘there is no away’. Feminist science studies generated critical insights prior to the designation of the Anthropocene epoch, many of which have proven salient in our current, ecocidal trajectory (Alaimo 2008). Donna Haraway (2015: 164) proposed ‘response-ability’ as a means to gauge our capacity to respond, relate and act on interlocking forms of instability, both social and ecological.<sup>4</sup> As we attempt to respond to, and with, the world cryosphere in the form of glaciers and ice sheets, our ‘sympathies

and camaraderies' with non-human neighbours become tested (Behar 2016). In this article, we consider responses to melting ice as a human and non-human endeavour. Response, for us, is a reaction and an attempt at an answer. But response is also a mode of recognition, of seeing, feeling and knowing the continuum between human and material worlds, as well as a relational ontology of care and attention (Puig de la Bellacasa 2017) that is increasingly necessary and urgent in our times of profound anthropogenic impacts.

We have also been influenced by the wealth of ethnographic material illustrating the diversity and extent of 'sentient landscapes' – bodies of earth, air and water that are agential and in various ways 'alive' with subjectivity and authority. In her formative work, Isabel Stengers (2010) theorised how 'cosmopolitics' – the intimate intertwining of humans and non-humans, and the inseparability of a cosmos from a politics – serves as a challenge to global Northern perceptions of personhood and the positioning of 'culture' over 'nature'. Anthropologists, especially those working with Indigenous peoples, have also long recognised the salience, and sentience, of non-human entities within cosmological systems. Elizabeth Povinelli, for instance, narrates how aboriginal peoples identify the powers of Two Women Sitting Down, a sacred site that most settler colonials would call 'mountains' (2016: 49–50). Ana Mariella Bacigalupo (2021) and Georgina Drew (2020) both demonstrate, in very different settings, how land and water forms function as ethical actors in the collective work of environmental politics. *Earth Beings* (2015), Marisol de la Cadena's award-winning book, illustrates how sentient mountains participate in community rituals and protests. And, in the work of Eduardo Kohn (2013) we find forests actively negotiating their place within Indigenous Amazonian environmental activism. Legal cases, under the rubric of 'rights of nature' have also signalled how non-human entities such as rivers (like the Whanganui in Aotearoa/New Zealand) and glaciers (like Gangotri and Yamunotri glaciers in the Himalaya) have achieved the rights of personhood: a legal standing that facilitates their protection from the harms of pollution, development and runaway climate change. While Icelandic folk traditions do not take mountains or glaciers as sentient beings *per se*, there has been a long tradition of belief in the sentient occupation and guardianship of mountains and rocks by spirits and non-human beings like *huldufólk* in the near-human landscape, as Gísli Pálsson has described (2020: 35–36). In a commensurate way, as we learn from Karine Gagné (2019), local people may sense a 'broken bond' between wounded environments and the human responsibility and commitment to them. Or, as David Anderson points out, the social relationships between humans and non-humans, particularly those rooted in a specific place, can be said to be existing in 'a sentient ecology' (2000: 46) even if that ecology does not include ascribing vitality to (normatively) non-living entities.

These examples provide perspective on what constitutes sentience, or 'vital matters', and how that can be accounted for within communities and across legal regimes. Sentient places such as these also draw our attention to the antagonistic, and obstinate, conceit of human exceptionalism as a settler liberal political project that elevates human needs and survivance over all other vital forms and, of course, over 'non-living' entities as well. As Povinelli (2016) has rightly noted, there is a predisposition within western philosophy to focus on the binary of (human) life and death, and to

valorise life over non-life. In our work, we aim to disassemble the binary between life and non-life further by questioning that division as a dual, twofold form ('living' vs 'non-living'). Instead, we argue for the importance of a continuum between sentience, liveliness and inanimate entities. The equivocations between the living and the dead, the vital and inanimate, is, we find, an especially generative space of reflection for the Anthropocene age<sup>5</sup> when all living beings depend, as they always have, on non-living matter but now also face unprecedented challenges for species survival related to disruptions to earth systems.

### **Not Ok: A Little Movie about a Small Glacier at the End of the World**

For seven hundred years or so, Okjökull lived atop Ok mountain. There, it accumulated snow and ice. It also crawled, not quickly, but persistently, down the northern face of the now-extinct shield volcano where it made its home. Okjökull was the smallest of Iceland's named glaciers; nonetheless it appeared on every glacier map of the country going back several hundred years. Located in the Borgarfjörður region of western Iceland, Icelandic schoolchildren have learned Ok's name in their geography classes alongside its more famous and spectacular brethren like Vatnajökull and Sólheimajökull. We encountered Ok mountain and Okjökull (*jökull* means glacier in Icelandic) in the early stages of our research on the social life of ice. In search of glaciers and the people who lived near them, we found Okjökull located not far from the country's only city, its capital, Reykjavík.

Some say that Ok's glacier sticks in the memory because of its funny name, 'Ok'. The word means 'burden' in somewhat archaic Icelandic. It reads, of course, to many younger and older generations of Icelanders alike as the English word 'OK'. In our quest to find out more about Okjökull, this little glacier with an odd name, we found there was almost nothing written about it: not in English and not in Icelandic either. Combing through glaciological works (Björnsson 2016), we found that at the turn of the twentieth century, Okjökull covered at least fifteen square kilometres. But since then, its glacial mass had been dwindling. We discovered a very brief report – just under eighty words total – in the English-language magazine, *Iceland Review*. There, Icelandic glaciologist Oddur Sigurðsson declared that Okjökull had lost so much of its icy mass that it could no longer be classified as a glacier. It was a brief obituary, of sorts. When we were able to speak with Oddur in the summer of 2017, he elaborated further,

In the year 2000, Okjökull was measured to be four square kilometres, but two years ago [2015] it had turned to 0.7 square kilometre. Now he's significantly less than that. And his present condition does not qualify him to hold the title of glacier. To be a glacier, they have to be thick enough to collapse under their own weight.<sup>6</sup> In order to do so they must be around forty to fifty metres thick and this glacier does not meet that requirement . . . I think I can say for certain that Okjökull is only a few dozen, maybe even just ten metres, thick now.

Okjökull had thinned to the point of declassification: a loss of its (or 'his') identity as a glacier.

Iceland's smallest named glacier was never a very famous one. Ok mountain only merited a single mention in the Sagas and even then was distinguished only as a mountain that a horseman passed by on his way to someplace else. In more recent times, Okjökull was never even recognised by the country's glacial tourism industry. In one of our conversations with the owner of a tourism company in Reykjavík, the possibility that anyone would want to visit Okjökull was met with spontaneous laughter. It was an almost ludicrous suggestion and in fact the tourism expert could not even find Ok mountain on the map that hung on his office wall. Like the many millions of tourists who visit the country each year, Icelanders also rarely visit the mountain or its now-deceased glacier, even though it is only about ninety minutes' drive from the capital city. While 'little Oki' – as Oddur often called him – never had a claim to fame, the glaciologist had been observing his disappearance for some time and he had a certain affection for the glacier, whom he now determined to be 'dead ice'.<sup>8</sup> Oddur went on:

One hundred years ago, and even more than that, no Icelander would have grieved a glacier. They were just threat and terror, but today we look at them completely differently. For glaciers are both incredibly beautiful and impressive in the environment, and an intriguing part of nature. And, last but not least, they are superbly knowledgeable about history. They conserve the history of Iceland and we have yet to study it. [That history] is conserved in the layers of the glacier, both the amount of rain, dust, isotopes and ash layers and this story we must collect before the glaciers melt. They are vanishing in front of our very eyes. If it goes as it is predicted, the glaciers will disappear in the next two hundred years; that is Icelandic glaciers, who are currently around one thousand years old . . . we can say that in some way that we are losing five years of our history every year.

Oddur's comments centre attention on the narrative power of glaciers: as those that recite history through their preservation of material forms and events, such as rain and ashfall, dust and the deployment of nuclear weapons. Their disappearance is more than the loss of an environment, or a 'solastalgic' (Albrecht et al 2007) memory of a prior landscape. Rather, the corpus of ice exists as chronicler and archivist whose loss, as Oddur points out, is now worthy of grieving.

Oddur's description of glaciers as storytellers in their own right, coupled with his affection for the little, uncelebrated glacier, inspired us to tell Ok's tale—both that of the glacier (Okjökull) and the mountain itself—in a different way. After all, we thought, here is the first of Iceland's glaciers to be destroyed by climate change and the world seems to have collectively shrugged at its passing. We felt, as did Oddur, that Okjökull deserved a better farewell. We also felt that using a communicational mode that went beyond the metrics of glaciology and the technical register of social scientific reporting might allow for Okjökull to speak, perhaps, on his own behalf. In our collaboration, we began by reaching out to Icelandic friends and colleagues in the media industry and were lucky to find Ragnar Hansson, a filmmaker and drone video operator who, working as our cinematographer, went far beyond that role. The film, we knew, had to be called 'Not Ok', because indeed "Ok" was not OK. We likewise knew that Okjökull's place in the history of the melting world needed to be indexed, but in an appropriately humble way. Ultimately, we called the film 'Not Ok: A Little Movie about a Small Glacier at the End of the World'.

Our use of ‘end of the world’ was doubly metaphorical, recognising that Iceland sits near the northern pole of the planet and thus the ‘end’ of the world, but also, quite obviously, to invoke a sense of ironic peril in a time when it appears that some ‘end of the world’ is nigh, particularly when we look to climatological changes and the unfolding of the sixth great extinction (Kolbert 2014). Over the course of a month in the summer of 2017, we were able to interview Icelandic politicians, academics, artists, hikers, farmers and even a priest for the film. Our primary focus was to elicit what Okjökull meant to them and over the course of those conversations we found that, like Oddur, the themes of loss, death and grief occurred over and over. Our interviewees’ emotional relationships to Okjökull varied from indifference to sadness but overall they expressed a sense of loss over this little glacier that, while not majestic, was part of a larger Icelandic landscape. While everyone with whom we spoke knew about Okjökull and its location atop Ok mountain, almost none of them had actually visited it. Foreigners had not heard of this little dot of dead ice either. Okjökull’s minor status, its un-celebrity, really struck us. We began to wonder what Ok mountain might, himself, say about the loss of his glacier, an icy companion that had sat with him for the last seven hundred years but that now, because of humans, was no more. To be able to think like a mountain became our odd task: an impossible one. But it was also a playful undertaking where we were able to exercise a degree of creative licence. We decided, for instance, to slow our (human) narrator’s voice to 80 percent speed in order to have Ok mountain speak in a drawn-out and deepened register; this effect also came to sonically represent what we came to call ‘mountain time’. Ok mountain’s opinion, his sensibility and his interpretation of human behaviours became the central trope of the film,<sup>9</sup> which debuted in Reykjavík in the summer of 2018.

As we followed the ethnographic stories that Icelanders shared with us in the film, we were also struck by the rather twisted irony of the country’s glacier tourism industry. In one sense, that industry draws visitors to witness the majesty of the country’s large glaciers and perhaps spurs foreigners to action as they recognise the dissipation and retreat of these grand cryoforms. In another sense, glacier tourism is a morbid sort of ‘last chance’ travel where visitors are treated to the final vestiges of a cryosphere that has conditioned all human life on the planet over the last twelve millennia of the Holocene. One might take it as a macabre statement that, in addition to riding across dying glaciers on snowmobiles, each of these visitors has arrived from a distant place on a jet plane, powered by the very fossil fuels that have led to the undoing of the planet’s glaciers. Our sense, percolated over time during our pilot research, was that Iceland really ought to have an ‘un-glacier tour’ – where the true losses of the Anthropocene could be witnessed. We shopped the idea around to tour companies but to no avail. Undeterred, we contacted the Icelandic Hiking Society to see if their members would be interested in a trip to the country’s first dead glacier. On the morning following the film screening, we loaded up the largest bus for hire in the country, with about forty of us aboard, including a glaciologist who would provide an overview of Icelandic glaciers and their predicted future. It was an unusually kind day in the Icelandic highlands where we found more sun than snow. As we neared the top of Ok mountain, our glacier guide, GPS device in hand, motioned for us all to link hands and take a photo. On the way down the mountain, about three hours later, we encouraged our group



to seek out a perfect stone where we hoped to one day place a memorial to the little glacier whose last known home we had just visited. That rock appeared clearly out of the many others surrounding it and it became, a year later, the place where we would install 'A Letter to the Future'.

Creating the film required listening closely to the narratives of Icelanders as they reflected on Okjökull, in life and in death. But in many ways, this is standard ethnographic practice: to select a topic and engage in conversation those who are close to it as well as knowledgeable about it. However, in attempting to tell the story through different means – beyond the text and analytics of social science – we were challenged with the multidimensionality of film, just as other ethnographers before us have been. Ethnography through film is visual, dependent on the play of light; it is sonic, contending with the rattle and hum of an environment and it is technical, requiring digital skills in editing and postproduction. It is an exhilarating and also humbling endeavour. As others have found, 'storying' the climate crisis from the perspective of a particular place and group of people is both an affective and political project (Crate 2017; Cruikshank 2006); it is also an emergent practice. We came to realise that, in an effort to bring Ok's story to a wider audience, our own perspectives shifted toward other modalities of ethnographic messaging that travelled from film to tour and finally to a funeral.

## Funerals are for the Living

In summer 2019, after a year of planning (and permits from the Icelandic authorities), we assembled a large gathering in the place where Okjökull had whiled away the centuries. We had all come for its belated funeral. A memorial service for a glacier had never taken place before, perhaps because, as our friend and collaborator Andri Snær Magnason put it, 'there has never before been a need for a glacier funeral'. Now there is. While it is true that there is a first time for everything, it is also true that our day on the mountain will not be the last memorial for a glacier lost to climate change.

But how do we memorialise something that was never, in truth, 'living'? Okjökull, in its time, moved across the stony face of Ok mountain. Gravity pulled at its glacial ice and the weight of its own corpus allowed it to inch across the landscape. Although it moved, it was not, by definition, alive. And, yet, the news of Okjökull's expiration inspired an outpouring of mournful commentary in social media outlets and traditional news sources. When we released word of the glacier memorial, thousands of news stories began to appear across the world about the ceremony to be held for a glacier-that-was as well as the meaning and intention behind it. As anthropologists, many of us are at least initiated into the cultural universal of mortuary rituals – those events that have taken place in all human societies over time, albeit in quite different forms. But what do we say and do in response to the 'death' of ice, a non-living, elemental 'thing'?

Creating a letter to the future is one answer. For the words we would put on the memorial plaque, we turned to Andri, a celebrated Icelandic author and poet. After some back and forth, we all arrived at



### A letter to the future

Ok is the first Icelandic glacier to lose its status as a glacier.  
 In the next 200 years all our glaciers are expected to follow the same path.  
 This monument is to acknowledge that we know  
 what is happening and what needs to be done.  
 Only you know if we did it.

**FIGURE 1.** Okjökull memorial plaque, embedded in stone atop Ok mountain, August 2019

Ok mountain is not particularly steep, but it also has no path or trail to the top. There are sizeable rocks all the way up and all the way down. On that August morning, we are about a hundred scientists, artists, journalists, activists, politicians and others. There are a few septuagenarians, at least one eight-year-old, and half a dozen youth climate activists carrying bright home-made signs. The rest of us are every age in between, with many nationalities represented. As we reach the peak, Andri reminds us of an old Icelandic tradition. When ascending the sacred mountain Helgafell, one must go forward in total silence, never looking back. If we hold good in our hearts, the folk legend goes, we will be granted three wishes. And so we go.

Public recognition of a death is an important human act, although the objects and symbols people use to mark a passing are many. A formal declaration of some kind is common. At Okjökull's funeral this would include reading aloud the death certificate that Oddur has brought with him in his backpack. As the thin paper document rattles against the wind, Oddur points out that Okjökull's cause of death, as penned on the form itself, is 'Death by heat. Death by humans.' A handful of us say some words; we note that Okjökull may be the first of Iceland's glaciers to meet its end, but it will certainly not be the last. The crowd, huddled closely together against the wind and cold,

commits to finding ways to address the climate crisis. In times of rapid collapse, one cannot rest on ceremony alone. And so any memorial to a fallen glacier is not only a moment of reckoning, it is also a call to action.

If, in the past, icy places have been taken as natural configurations of a landscape, as mystical spaces of infinitude or as entities that can both provide life and bring death, that is now changing. In melting glaciers, we see heat absorbed: an atmosphere enacting a thermal play on bodies of ice. This is the heat of humans – as Oddur put it – but of course, this heat has not been produced equally by all humans;<sup>10</sup> it is the industrialised world that has brought on the great melting at both ends of the world. As dramatic climatic impacts are increasingly visible and felt, and when our best science continues to pound out cataclysmic truths, the relations between humans and non-humans, between elemental forms like ice and those of us who wander with biotic vitality, are experienced differently. Ice and people now live together more precariously. We are, therefore, called on to respond in new ways and with new attentions to care. Glaciers are not, according to the logics of western science, living beings (Cruikshank 2006). But, in memorialising their passing, their expiration may semiotically, and affectively, bleed into a kind of ‘dying’.

Ultimately it is the living who feel a death. And, as one of our Icelandic friends put it as we made our little movie, ‘funerals are themselves rituals for the living’. Not just in Iceland but in several sites around the world,<sup>11</sup> the expiration of glaciers has become the catalyst for the formation of new communities of concern and care. We find these communities’ interest in creating new geohuman rituals of mourning very encouraging. Ritual has always served humanity as a way of generating community and solidarity in times of existential transition. Facing fundamental threats like climate change and species extinction, we have never needed human and more-than-human solidarity than we do now. Communities of glacial care may even seed new kinds of prefigurative politics, inviting us toward worlds in which sentient landscapes are treated like kin. As David Graeber once remarked, ‘It’s one thing to say another world is possible. It’s another to experience it, however momentarily’ (2002: 72).

## The Future is Fragile

In the pages of the latest IPCC report, there is no ignoring the growing evidence of the precarity that surrounds us. As Marisol de la Cadena and Mario Blaser rightly put it, ‘very few, if any, of the readers of *Nature* can currently deny that the planet is being driven down a perilous path’ (2018: 3). Or, in Kirsten Hastrup’s terms, ‘[i]n the Anthropocene, all nature has in some way become environment . . . defined by and defining human life on the planet’ (2014: 5). The diagnoses of thousands of studies illustrate, in sobering terms, that multiple environmental impacts coming from greenhouse gas emissions, past and present, ‘are irreversible for centuries to millennia’. They likewise emphasise that these effects are most striking in ‘changes [to] the ocean, ice sheets and global sea level’ (IPCC 2021: SPM 28).

With the growing awareness that we inhabit an increasingly perilous world, new vulnerabilities appear. But this precarity was always there. Our earth system may have

seemed, in previous times and to some populations, to be impervious, ever-regenerative and immune to deep ruination. That was always a fallacy, but its lie (or ignorance) is now harder to obscure with the usual demands for economic growth, expansion, extraction and anthropocentric domination. For this reason, the most recent IPCC reporting on mitigation and adaptation has advocated, for the first time, the need for ‘degrowth’ in critical areas of economic activity. When multiple fragilities are exposed and acknowledged, they also offer up new opportunities for renewal and recognition. As Marilyn Strathern puts it, ‘When relatedness becomes implicit, new elements become explicit’ (2021: 295). Placing headstones or monuments is one well-rehearsed human practice the world-over that responds to the fleetingness of human life; but in an anthropocenic age of human disruptions to ecosystemic balance, headstones are also a marker for the fragility of non-humans as well, even those that were never, technically ‘alive’. Povinelli (2016) reminds us that the divide between life and death has long been a subject of humanistic inquiry. But in the Anthropocene age, the divide between life and death also sits alongside the distinction between the living (species of the planet) and the non-living (such as cryoforms or earth entities). Each is a locus for ontological questions and existential debate: what is the distinction between *living* and *non-living* when all biotic life is imperilled by the ‘non-living’ world of water and ice, solar radiation and atmospheric carbon? Indeed, how does life, paradoxically, *depend on* those same said non-living things of water and ice, solar radiation and atmospheric carbon, for its very existence?<sup>12</sup>

Scientific warnings will continue to swell and multiply. These points of collapse share a kinship, a root and a source of human-generated harm that has us occupying ‘blasted landscapes’ (Tsing 2014): places that we all now call home. For Icelanders, human survival on a remote, northern island has always meant living with a profound recognition of nature’s potency and destructive potential. It has meant having a keen attention to shared vulnerabilities between humans and non-humans, whether acknowledged or left unacknowledged. We read a certain resignation in the Icelandic expression *eftir veðri og vindum* (‘everything goes by weather and the winds’); but we also see geohuman relational wisdom in those words. In this abandonment to the elements lives a moment of reflection on a world that is not made by humans alone.

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## Notes

1. The book's original Icelandic title was *Kristnihald Undir Jökli* (Christianity Under the Glacier).
2. A recent study (Brice et al 2022) suggests, however, that the massive volume of Greenlandic meltwater may create a 'blue blob' of cold water and air that could grant Iceland's glaciers a temporary reprieve from accelerated melt until the mid twenty-first century.
3. Thanks to an anonymous reviewer who pointed out that, in some respects, this account is partially 'auto-ethnographic' in that it charts our responses, as anthropologists, to the events along with those of the Icelanders we interviewed and with whom we spent extensive time.
4. Haraway's response-ability also dovetails with the call from Max Liboiron and colleagues (2021) to 'intentionally move our scientific work' toward benefitting the communities with whom we work with and toward a politics of engagement, or 'reconciliation science'.
5. On 'lifedeath' see also Boyer (2021).
6. By 'collapse under their own weight', Oddur is referencing the glaciological process whereby glaciers move across ground, through a combination of weight and mass accumulating on the glacial surface and gravitational downward pressure.
7. Here we are adopting Icelandic linguistic gender conventions for glacier (a masculine noun); we are also following Oddur's lead in using pronouns to describe the glacier as 'he'. We are not suggesting that Oddur (or other Icelanders) are attributing sentience or vitalism to the glacier itself. See also Pálsson (2020) on earth guardianship in Iceland historically and in the present.
8. By 'dead ice', Oddur is referring to a mass of ice that has glacial properties, including the specific crystalline structures that occur through the compaction and motility of glaciers, but that is no longer moving across land due to its mass and gravity. Movement is one, but not the only, qualification that makes a glacier distinct from immobile ice masses.
9. See: <https://www.notokmovie.com>

10. While human impact is collective, its origins lie mainly in the resource exploitation of large, industrialised countries and its outcomes will be felt most severely in places least able to withstand catastrophic events such as drought, extreme storms and infrastructural collapse.
11. Only a month after the installation of the Okjökull memorial, a group in Switzerland performed a funeral for the Pizol glacier (see, for example, <https://www.npr.org/2019/09/22/763229087/hundreds-attend-funeral-for-pizol-a-disappearing-glacier>). The month after that a plaque was laid for the Pyrenees glacier d'Arriel. In 2020, a group of mourners gathered to commemorate the death of Oregon's Clark glacier (<https://gizmodo.com/mourners-hold-a-funeral-for-a-dead-oregon-glacier-1845426351>). And, in 2021, the Mexican glacier Ayoloco was commemorated with a plaque (<https://www.infobae.com/america/mexico/2021/04/22/un-funeral-para-el-glaci-ayoloco-expertos-de-la-unam-colocaron-una-placa-en-lo-que-fue-uno-de-los-cuerpos-de-hielo-permanentes-de-mexico/>). Interestingly, the memorial texts for d'Arriel and Ayoloco resembled Andri's text for Okjökull quite closely, suggesting that Okjökull's memorial is serving as a template of sorts for other glacier memorials.
12. See, for example, Howe et al (2023), Neale et al (2022) and Papadopoulos et al (2022).

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## Le mémorial d'Okjökull et les relations géohumaines

**Résumé :** En se concentrant sur la vie et la mort d'Okjökull, le premier des principaux glaciers islandais à disparaître en raison des changements climatiques anthropogéniques, cet article discute les relations complexes entre la cryosphère et les communautés humaines en Islande. Il questionne la manière dont les distinctions entre entités non vivantes et êtres vivants peuvent offrir des perspectives à l'anthropologie et la transdisciplinarité en tant que modèle pour reconnaître des précarités mutuelles entre monde vivant et non vivant en face du changement climatique anthropogénique. En détaillant la rencontre ethnographique entre les auteurs, la montagne Ok et l'Okjökull (le glacier), les auteurs défendent l'idée qu'en prenant acte des formes non vivantes et en marquant leur « disparition » ou leur perte, nous sommes en mesure de documenter et de mieux comprendre les événements de bascule dans la vie de notre planète.

**Mots-clés :** anthropologie publique, plus-qu'humain, glacier, douleur, affect, vivant / non vivant, Islande, Arctique