DEATH OF A GLACIER

IN 2014, THE FIRST OF ICELAND'S NAMED GLACIERS SUFFERED DEATH BY HUMAN-MADE CLIMATE CHANGE. TWO ANTHROPOLOGISTS DECIDED TO MARK ITS PASSING.

By Cymene Howe and Dominic Boyer

The "land of fire and ice."
RAGNAR ANTONIUSSEN

Sometime around the year 2000, no one knows exactly when, something small died in Iceland. Its name was Ok. And it was a glacier. Ok was relatively slight and not particularly handsome as Icelandic glaciers go. It hadn't received much attention from Icelanders during its 700-year life. But Icelandic children did learn about it in school and some recalled laughing at its funny name. In old Icelandic the word "ok" meant "burden" or "yoke." But in contemporary Iceland, under the potent influence of the English language, some people read the name like "OK." As it turns out, Ok was not OK. It was gone—the first of Iceland's named glaciers to be killed by anthropogenic climate change.

One of Magnason's big ideas is that what used to be geological time is becoming human time; we can now watch natural beings such as glaciers that took centuries to form disappear in just a few decades—easily within a human lifetime.

If you missed the news about Ok's passing, you weren't alone. The "body" was only discovered, so to speak, in 2014. A current affairs show aired a short feature on Icelandic public television. In it, glaciologist Oddur Sigurdsson ventured to the top of Ok mountain to confirm his suspicion that Ok glacier (more properly, "Okjökull" since "jökull" is the Icelandic word for glacier) no longer had the mass to move under its own weight. Movement being one of the critical requirements for glacier status, Sigurdsson determined that Okjökull was no longer a glacier. Instead, as Sigurdsson put it, "he is only dead ice." Beyond Iceland, the news barely circulated. By the time we heard of the story in 2016, there was just one English language report of Ok's demise and it was a mere 79 words long. The world had essentially shrugged.

And yet, the first Icelandic glacier to die because of global warming seemed to us to be a rather big deal. Iceland—the "land of fire and ice" as it is often known—has over 400 glaciers, which are collectively losing 11 *billion* tons of ice a year. Okjökull was the first major Icelandic glacier to disappear but others will soon follow; the magnificent glacier, Snæfellsjökull, muse of the Nobel laureate Halldór Laxness, and visible on a clear day from Reykjavík, is predicted to have 20 years left at most. It might not seem so significant that a little glacier dies in a place far from where most humans live. But these small casualties are mounting and beginning to look like a mass grave. At the current pace of melt—which is accelerating—all Iceland's glaciers will have disappeared in under 200 years. And most of the rest of the world's glaciers will be gone before then.

We struggled with how to process the loss of Okjökull. What could we do? Although we are not glaciologists, we recognized that the loss of glaciers in Iceland goes way beyond ice forms and the geological and weather conditions that shape them. As cultural anthropologists, we could see that people were implicated in the loss of glaciers in at least two ways: On the one hand, human activity—globally and historically—is ultimately responsible for today's glacial melting. On the other, humans are bound to have a complex emotional and intellectual response to this changing natural environment, especially in a country like Iceland whose identity is so bound up with its glaciers. For many, climate change may seem to be an environmental problem but really, it is a human problem.

We thought that we could address this problem by bringing the story of Okjökull to a wider audience. But we recognized that our bread-and-butter media—academic articles and books—probably weren't going to be the most effective vehicle. So, working together with Icelandic cinematographer Ragnar Hansson, we made a short documentary film instead, called *Not Ok: A Little Movie about a Small Glacier at the End of the World*. In that film, we talk to Icelanders from all walks of life about their landscape, the places they live, the losses they are seeing unfold before their eyes. And we ask about what little Ok's death means to them.

One of the most moving conversations we had was with Icelandic writer Andri Snær Magnason, an ardent environmentalist and someone who is deeply concerned about the human impact on planetary ecosystems. One of Magnason's big ideas is that what used to be geological time is becoming human time; we can now watch natural beings such as glaciers that took centuries to form disappear in just a few decades—easily within a human lifetime. He pointed out to us that a 10-year-old child today could very well have a grandchild alive in the year 2170, when there will no longer be glaciers in Iceland. Today's 10-year-old could send a personal message to the ice-free future through their kin. And if they did, what might they say? That got us thinking about the possibility of creating some kind of memorial to Okjökull that would essentially materialize a message to the future. And so the world's first memorial service for a glacier took shape.

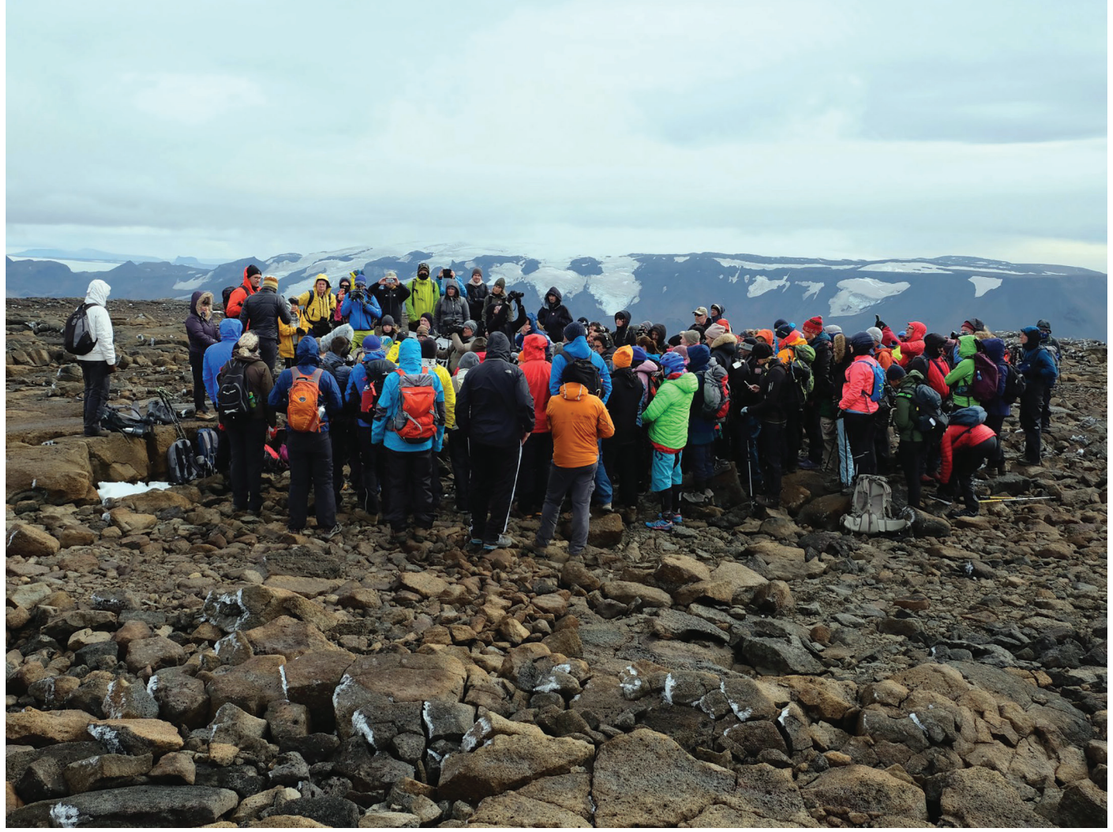
JOSHUA STEVENS/NASA EARTH OBSERVATORY

Top: Ok glacier (top left) in 1986. Bottom: Ok glacier in 2019.

FUNERALS ARE FOR THE LIVING

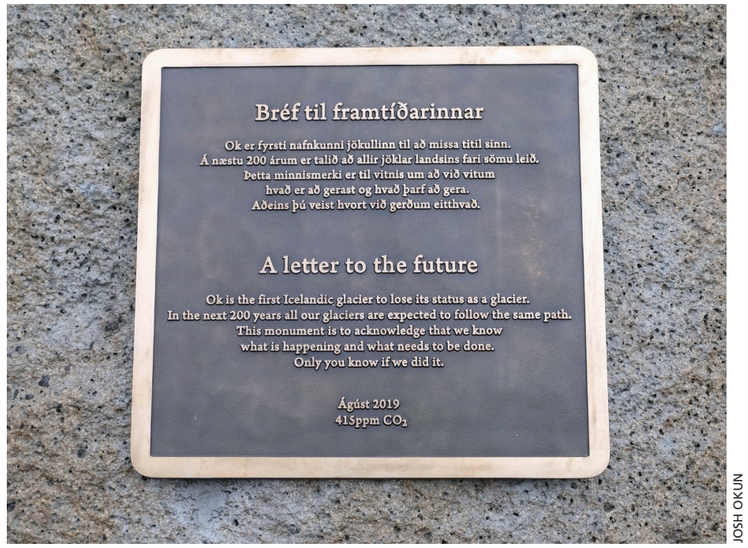
On a cold morning in mid-August 2019, we are aboard the largest bus-for-hire in the country and winding through the Icelandic Highlands across roads made of lava stone. The bus is full of mourners, activists, scientists, and journalists who have come to commemorate the passing of Okjökull. An Icelandic teenager reads aloud a poem she has written in memory of the little glacier that was. A glaciologist talks to the group about how global warming is destabilizing glaciers across the world. There is a feeling of anticipation, conversations in many languages. When we arrive at the base of Ok mountain, it is clear that there is no path to the top, no easy trail for people to follow. It is a two-kilometer, roughly three-hour scramble over rocks large and small; there are frequent pauses to help each other up. As we ascend, the moss-covered hillside gives way to lichens and jagged stones that still hold the fluid forms of hardened lava. The tiniest of flowers bloom in the shelter of rocks auspiciously situated to ensure their thriving. At times, the wind blows fiercely; the temperature drops; at the cusp of the summit we discover a small stream formed by the melting ice.

Every culture has its death rituals. They are a universal way of honoring and mourning the dead, throughout human history and everywhere on Earth. The objects and symbols people use to mark a passing are many. We decided on a memorial plaque for little Okjökull because



AMY McCAIG

People gathered for the memorial service.



JOSH OKUN

The memorial plaque for Ok glacier, with text by Andri Snær Magnason.

"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."

memorials are monuments of mourning, recognizing lost lives or historical events; very often memorials materialize pride in human accomplishment. With the Ok memorial, we wanted to recall that climatological collapse is also a human accomplishment, though one we would be foolish to take pride in. Most people on Earth will never touch or smell or taste or listen to a glacier in their lifetimes. But we all know about the end of life because there is no avoiding it. Not for humans and now, because of humans, not for glaciers either.

As we pause to rest by the stream, Magnason—whom we asked to write the text for the memorial plaque—observes that there has never before in human history been the need for a ritual to say goodbye to a glacier. We will have to invent one as we go. In the old Icelandic tradition of the sacred mountain Helgafell, climbers walk forward in silence, never looking back. If we hold good in our hearts, the folk legend goes, we will be granted three wishes.

Our group arrives at a large slab of basalt where the bronze memorial plaque will be installed. Glaciologist Oddur Sigurdsson produces a death certificate from his backpack that he has submitted to the authorities. The cause of death, he announces, is "excessive heat" and "humans." The Icelandic Minister of Environment shares some words, as do a handful of others. Thoughts cluster around what has been lost and the need to act. The question of how future generations will judge us for what we do, or don't do, hangs in the air. The ceremony ends with another long moment of silence where we commit ourselves to an action to prevent further harm to the climate and all our earth systems.

An Icelandic teenager reads aloud a poem she has written in memory of the little glacier that was. A glaciologist talks to the group about how global warming is destabilizing glaciers across the world.

Children push the plaque into place, cementing an unknown future. There is some sadness, but more present is the feeling of determination. This was an experimental funeral, a modest memorial for a little glacier in small country. We know it will not be the last glacier to die. And we know that many other natural forms will eventually need to be memorialized as human-made environmental effects take their toll.

But funerals exist to inspire togetherness and purpose among the living, not only to honor the dead. As if on cue, the Icelanders among us spontaneously break into song. Then we descend.

ONLY YOU KNOW IF WE DID IT

The installation of the memorial plaque on Ok mountain was a media event covered in nearly every country in the world—Reuters, the Associated Press, and the BBC carried the story among other international media. It appeared in the *New York Times*, the *Washington Post*, and *Time*; *Der Spiegel* and *Le Monde*; the *Guardian* and *CNN*; and was televised in Australia, Germany, India, Switzerland, the United Kingdom, and the United States. We found that the story also resonated in unexpected places like *Popular Mechanics* and the Vietnamese edition of *Elle* magazine; we could not in fact keep track of all the stories. We are not sure why this event captured the popular imagination far beyond Iceland. But here is our thinking. Climate change is such a massive and complex problem that it is can be emotionally paralyzing. It is hard to know where to look or how to feel. The disappearance of a little glacier in a small country is meanwhile a loss at a scale that all of us can understand. Strangely perhaps, the story of Okjökull seems to have humanized climate change for a lot of people. It put a face and a name to an abstract problem. In climate change, as in life as a whole, small deaths matter.

Yet small actions matter too. This is perhaps the moral we would offer to public anthropology. Climate change is the defining civilizational challenge of the twenty-first century. There are no guarantees of further centuries if we cannot find a less ecocidal trajectory. Climate science must become the basis of social policy at a global level, but getting there is going to involve more than just finding better ways of communicating climate science. Equally important to changing our ways of being in the world is the power of language and poetry, ritual and ceremony, symbolism and collective actions. Art and culture can help reshape our sense of time, place, and responsibility. And anthropologists, with their capacity to observe and understand the intimacies of living in the Anthropocene, can be a huge help in conveying the multiple messages that need to be heard.

Gunnhildur Fríða Hallgrímsdóttir, the teenage climate striker who wrote the poem for little Ok, "The Burdened Glacier," offers us inspiration. "I know" she said that day on top of the mountain, "that my grandchild will ask me where I was this day. And then they will ask, 'What did you do to stop the destruction of the world?' And I will have to answer for that." In truth, all of us who live in the Global North will have to answer to future generations for our actions and inactions. We need to care for our future relations today.

Cymene Howe is professor of anthropology at Rice University and author of *Intimate Activism* (2013), *Ecologics: Wind and Power in the Anthropocene* (2019) and co-editor of the *The Johns Hopkins Guide to Theory* and *The Anthropocene Unseen: A Lexicon* (2020). She currently researches the social dimensions of melting ice in the Arctic and the linked effect of sea level rise in coastal cities.

Dominic Boyer is professor of anthropology at Rice University and founding director of the Center for Energy and Environmental Research in the Human Sciences (2013–2019). He is currently pursuing ethnographic research with flood victims in Houston, Texas, and on electric futures across the world. His most recent book is *Energopolitics* (2019), which is part of a collaborative duograph, "Wind and Power in the Anthropocene," with Cymene Howe.