We Are All Antarcticans

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Breaking the Ice: Women, Science, and Antarctica,Series

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As a teenager in the 1970s, I was shocked by the environmental destruction described by Rachel Carson in *Silent Spring* and entranced by the idea of living in the forest and studying animals, as demonstrated by Jane Goodall in Gombe National Park, Tanzania. These two highly influential women influenced me to study science and, in particular, biology.

At university, I soon found myself studying Antarctic algae and mosses and exploring ideas of distribution patterns between Australia's Alps and Antarctica's dry valleys. I absorbed everything I could about Antarctica and was excited (and somewhat obsessed) by the idea of a remote, wild continent so physically different to the lush forest valleys and high alpine snowgum plains I was used to in Australia. But actually visiting Antarctica eluded me. I had studied my supervisor's moss and algae samples, and when I applied to join Antarctic field teams, I was advised that my application could not be accepted as "there are no facilities for women in Antarctica." After persisting for a couple of years, but meeting the same wall, I tucked my Antarctic dreams away in the back of my head. For 30 years.

When I finally visited Antarctica in late 2016, it felt like a huge circle finally turning to meet a very neat connection in my life. Over the years, between yearning and visiting, I had layered many lenses through which to view this extraordinary place. Many of these lenses were around nature and how people interact with nature, and these lenses surely shaped my experience of the "south."

Moss and algae were my early introduction to Antarctica, and although I was in awe of our first icebergs and the dramatic landscape, it was these tiny plants that I yearned to see as we approached the Antarctic Peninsula. At the Argentinian Carlini research station, moss is revered. A roped-off space protects a vulnerable patch of threatened mosses. The station area is crowded, crammed on a narrow strip between the pebbly shore and the towering Three Brothers Hill. The mosses are smack in the middle of the natural pathway between the buildings; the encroaching buildings and the single rope fence around the mosses seems to represent the whole fragility of Antarctic species and systems, as activities bustle around them. I can't help thinking of the larger scale and of how entire Antarctic systems are under pressure, as they struggle to persist amongst a world of development and the pressure for resource exploration and exploitation.

The vulnerability of the mosses seems underlined by the overwhelming sense of change at Carlini. The scientists we speak to tell us about staggering changes they have personally witnessed and documented—glacial retreat of 100 meters over the past decade, the emergence of the pyramid-shaped nunatak in the glacier at the end of the cove, and changes in salinity and sediments in the bay. The shore is fringed with white chunks of ice, fragments washed up as slabs of the glacier collapse into the bay. As these melt, the entire ecosystem around Carlini is changing.

The dynamic changes at Carlini, and at all the sites we visited in Antarctica, appeared to me as sentinels of the Anthropocene, as a high-volume shrilling from "canaries in the coal mine." These changes signal a "high vis" version of climate change through the warming of the Antarctic Peninsula. Although Antarctica feels like a place almost empty of people, the impacts of people around the globe are evident here. I reflected on how my own work has increasingly recognized the "socio-cultural" in the socio-cultural-ecological systems in which we live and work. Many of my colleagues feel a kind of despair at having worked for decades in ecological restoration, only to see little improvement in ecological condition, or indeed simply record the decline. We clearly need to approach this differently and, as it is people who are the key drivers of change and who have control over impactful decisions and actions on the ground, it is people we must integrate into our work.

Antarctica, along with Greenland, is at the forefront of rapid change under the emerging climate collapse. Our collective impacts are delivering change to Antarctica, and we all have a responsibility to change our conversations, choices, and consumption behaviors. In a global sense, we are all “Antarcticans.” But how do we inspire a sense of ownership, value, and connection to Antarctica for “Antarcticans” who will never experience it? How do we increase global conservation efforts?

I reflected on these questions as we asked people about their responses to being in Antarctica, about what they could see, hear, smell, taste, and how it made them feel. What kind of connection do people make with a huge, wild, remote, and unknown landscape? Do they embrace its beauty and wildness, or shy away from its unfamiliarity? In the late 1980s to the mid-1990s, I organized multidisciplinary scientific expeditions to Australia’s red desert center. I witnessed a powerful response take place. Although unfamiliar to most participants, people adored the huge expanses of blue sky, far horizons across rolling, red dunes and wide, sandy swales, the complete hemisphere of night sky thick with stars, massive spidery salt lakes, overwhelming numbers of birds, the sense of space, the sense of disconnection from “normal life.” Their sense of well-being surged. As we have now come to know them, “greenspace” and “bluespace” are natural places that support people’s well-being.

I applied the term “redspace” to Australia’s heart. In Antarctica, I suggested the term “whitespace” might help us think about our responses to Antarctica. “Whitespace” follows the trajectory of “greenspace” and “bluespace” and recognizes the very powerful well-being benefits we experienced in this wild, mostly-white continent. Referencing a color also recognizes the dominance of the very visual responses we had to Antarctica: “I see white; huge expanses of white snow and ice…” We discussed the idea that white is a more complex color than any other; it includes all colors on the spectrum. Perhaps “whitespace” might include multiple ideas and ways of responding to place, and might recognize that our relationship with nature should be reciprocal and not just defined by the benefits we receive. But “whitespace” is a problematic term to apply to Antarctica, or any polar cryosphere, today. “Whitespace” can easily be interpreted to reference white people, white power, and privilege. This is not the lens we wish to apply to Antarctica, especially as we strive to see all people as “Antarcticans.”

Putting aside the term “whitespace,” I remained interested in the “-space” concept. I was interested to see whether this wild, remote, huge-scale place might generate a powerful sense of well-being in voyagers down “south,” similar to that I had witnessed in remote “redspaces.” For me, this was powerfully so. Wild nature is essential for my well-being. In Antarctica, there were moments when I felt a sense of exhilaration, an overwhelming elation at coming over a ridge to see a caldera, a volcanic crater, filled with over a quarter of a million penguins busily attending their nests. Similarly, watching and listening to pods of humpback whales appreciatively feeding on super swarms of krill inspired this feeling, as did gasping for breath whilst swimming in the icy, slushy sea at Neko Harbour. Carefully and tentatively stepping across the thin layer of fast ice, tethered to a semi-circle of mountains of such grandeur, literally took my breath away. These moments reinforced my own connection with nature and the integral part it plays in my own well-being, underscoring my understanding of Antarctica’s significance and that it absolutely demands greater global recognition and conservation effort.

This effort will take wide collaboration. As a place of international scientific attention, Antarctica demonstrates this for us. Many territories and research stations host multiple nationalities. For example, at Carlini we witnessed effective collaboration between a mix of scientists from Argentina, Germany, and The Netherlands. Many Antarctic programs extend beyond science; they offer the opportunity for true transdisciplinary practice through their inclusion of artists and writers. These programs will help us tell the stories of Antarctica and engage the world with the far south. Disciplines and communities across the world can hear these stories, bringing together multiple perspectives and ideas, creating a new pathway forward for Antarctica as a continent, and for all of us as “Antarcticans” and global citizens.

The stories of Antarctica I grew up with were stories of men, hardship, and endurance, through the “heroic” era of Antarctic exploration. My own early exploration of Antarctica’s ecology was limited because of narrow opportunities for women. But both of these eras have now passed. Our team’s efforts during our Antarctic journey launched a new approach for me in my work, which focuses on how to more actively bring together different perspectives and disciplines, integrating other ways of “knowing place” into my practice. I urge others to apply this approach to “knowing” Antarctica, too. Today, it is not only an opportunity; it is necessary in order to change our stories and narratives of Antarctica.

> The new stories of Antarctica will be wider, more inclusive, and will signal our connections with this wild white continent, as Antarcticans. These stories will be told by women and men; they will include stories of vulnerability and awe, of loss and learning, of ways of knowing and unknowing, and of sensing and connection.

One of the things we discovered in our own journey was that our attempts to describe Antarctica seemed inadequate—we literally felt lost for words. We imagine that weaving together science, art, and multiple perspectives may help develop a new language for Antarctica. We imagine that this new language might help people across the globe recognize their role as Antarcticans, nurturing a reciprocal relationship between people and Antarctica—a place distant for most of us, but integral to all our lives and futures.
