

Togetherness for Antarcticness

Madeleine G. Hann, Kristina Baltutis, Natalie Barefoot, Anne Charmantier, Anna Colucci, Carole Durussel, Amie Figueiredo, Stephanie G Gardner, Hannah Laeverenz Schlogelhofer, Stéphanie Langerock, et al.

▶ To cite this version:

Madeleine G. Hann, Kristina Baltutis, Natalie Barefoot, Anne Charmantier, Anna Colucci, et al.. Togetherness for Antarcticness. Ilan Kelman. Antarcticness: inspirations and imaginaries, UCL Press, pp.144-157, 2022, 978-1-80008-146-8. 10.14324/111.9781800081444. hal-04827735

HAL Id: hal-04827735 https://hal.science/hal-04827735v1

Submitted on 3 Feb 2025

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers. L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



ANTARCTICNESS





Edited By Ilan Kelman

UCLPRESS

Antarcticness

Antarcticness

Inspirations and imaginaries

Edited by Ilan Kelman



First published in 2022 by UCL Press University College London Gower Street London WC1E 6BT

Available to download free: www.uclpress.co.uk

Collection © Editors, 2022 Text © Contributors, 2022 Images © Contributors and copyright holders named in captions, 2022

The authors have asserted their rights under the Copyright, Designs and Patents Act 1988 to be identified as the authors of this work.

A CIP catalogue record for this book is available from The British Library.



Any third-party material in this book is not covered by the book's Creative Commons licence. Details of the copyright ownership and permitted use of third-party material is given in the image (or extract) credit lines. If you would like to reuse any third-party material not covered by the book's Creative Commons licence, you will need to obtain permission directly from the copyright owner.

This book is published under a Creative Commons Attribution-Non-Commercial 4.0 International licence (CC BY-NC 4.0), https://creativecommons.org/licenses/by-nc/4.0/. This licence allows you to share and adapt the work for non-commercial use providing attribution is made to the author and publisher (but not in any way that suggests that they endorse you or your use of the work) and any changes are indicated. Attribution should include the following information:

Kelman, I. (ed). 2022. *Antarcticness: Inspirations and imaginaries*. London: UCL Press. https://doi.org/10.14324/111.9781800081444

Further details about Creative Commons licences are available at http://creativecommons.org/licenses/

ISBN: 978-1-80008-146-8 (Hbk.) ISBN: 978-1-80008-145-1 (Pbk.) ISBN: 978-1-80008-144-4 (PDF) ISBN: 978-1-80008-147-5 (epub) ISBN: 978-1-80008-148-2 (mobi)

DOI: https://doi.org/10.14324/111.9781800081444

Contents

List	of figures	ix
List	of tables	XX
List	of contributors	xxiii
An	tarcticness beginnings	
	Foreword x Christiana Figueres and Musimbi Kanyoro	xxvii
1.	Proffering Antarcticness Ilan Kelman	1
Paı	t 1: Antarcticness living and partnership	
2.	Voyage into Antarcticness: a photo essay James A. Bradley	6
3.	Antarcticness at the ends of the world Gabriela Roldan and Hanne Nielsen	31
4.	Dealing with Antarcticness: the ABC of effective Antarctic team Jan B. Schmutz, Pedro Marques-Quinteiro, Walter J. Eppich and Mirko Antino	s 60
5.	Island of confusion, frontier of madness: the agony and ecstasy of Antarctic base life, 1942–82 Andrew J. Avery	78
6.	The land of letting go Jean McNeil	98
7.	A decolonial perspective of Antarcticness Rosa Jijón	105

8.	The ant-architecture of religion and spirituality in Antarctica <i>Ellen C. Frye</i>	115
9.	The southernmost wilderness: rhythms of the interior Antarctic expedition experience Wilson (Wai-Yin) Cheung	130
10.	Togetherness for Antarcticness Madeleine G. Hann, Kristina Baltutis, Natalie Barefoot, Anne Charmantier, Anna Colucci, Carole Durussel, Amie Figueiredo, Stephanie Gardner, Hannah Laeverenz Schlogelhofer, Stephanie Langerock, Anna Madlener, Cindy Shellito, Karen Spenley, Betty Trummel and Priscilla Wehi	144
	Haiku interlude Ilan Kelman	158
Par	t 2: Antarcticness knowledge and wisdom	
11.	The Antarctic Flags project: a flagship outreach campaign for international cooperation Sammie Buzzard and Tun Jan Young	159
12.	The art of interconnection: meaning, symbolism, and Antarcticness in Antarctic solargraphy Adele Jackson	182
13.	Discover, arrive, explore, return Elizabeth Bradfield	203
14.	Experiencing Antarcticness: slow tourists, fast penguins and timeless landscapes Daniela Cajiao and Yu-Fai Leung	210
15.	The world's greatest laboratory? Antarcticness as the relationship between Antarctica and science <i>Iqra Choudhry</i>	224
16.	On the edge of Antarcticness Emma J. Liu	241
17.	Haunted by Antarcticness David Rosenthal	270

Antarcticness continuing

18.	Not concluding Antarcticness	275
	Ilan Kelman	
	Afterword	280
	Dwayne Ryan Menezes	
	Index	289

List of figures

2.1 CHC (Christchurch airport, New Zealand) to NZFX (Phoenix Airfield, Antarctica) is far from your everyday journey. Stepping onto the stripped-out C-17 aircraft in custom-issued extreme cold weather (ECW) clothing despite the warmth of the midsummer day, I enter a cavernous, windowless, bare, spacecraft-like hollow cylinder. Rows of seats accommodate scientists, military personnel and station workers, alongside all sorts of cargo, including jet engines and even helicopter blades. There are only a couple of window seats, occupied by the pilots and some lucky invited passengers. Photograph by James A. Bradley, 2018.

2.2 The flight time from Christchurch to the ice runway of Phoenix Airfield, near Scott Base and McMurdo Station, in East Antarctica, depends on the aircraft and the weather. This US Air Force Hercules LC-130 makes the journey in seven hours, but does not carry enough fuel for a return trip. Therefore, pilots must decide, at the halfway point, also known as the point of no return, whether to 'brave it' and continue to Antarctica no matter any change in weather, or to 'boomerang' and turn the aircraft back around for New Zealand. This resignation of control holds true for much of one's experience of the southern continent, and the sooner this attitude is adopted, the sooner one begins to understand the essence of living and working in Antarctica. Photograph by James A. Bradley, 2018.

2.3 On the approach to the southernmost continent, the first visual sentiment of Antarcticness is of vast emptiness. The sense of scale is lost amongst disorienting floes of sea ice, floating ice shelves, ice cliffs, fractured glaciers and the

7

8

crumpled and jagged folds of mountains. The colour palette is dazzlingly bright, made up of blues, whites and pinks. Photograph by James A. Bradley, 2018.

9

2.4 Touching down in Antarctica, and leaving behind the blue ice runway, I become acutely aware of the immenseness of the surrounding landscape, and of the human determination to overcome this truly extreme environment (see Chapter 4). The metal shells of these Hercules LC-130 aircraft perch on the Ross Ice Shelf, silhouetted against the midnight bright blue sky. Photograph by James A. Bradley, 2018.

10

2.5 A fresh blanket of snow covers 'Mac-Town': McMurdo Station, the US hub of the southernmost continent. Truly at the edge of the map, amid a dazzling expanse of flat sea ice, rolling glaciers and jagged mountains, this is a mining-town-meets-college-campus wonderland (think fuel tanks, shipping containers, dormitories, cafeterias – all surrounded by untouched wilderness). Just offshore, the *Nathaniel B. Palmer* science vessel navigates a recently cut channel through the sea ice to reach land for the first time in several long weeks. Photograph by James A. Bradley, 2018.

11

2.6 McMurdo Station is home to around 1,200 summer staff and scientists, and 250 over-winterers. The corrugated iron domed Coffee Shop, one of three taverns in town, darkened from the midnight summer sun, provides a cosy setting for a glass of wine, a science talk or a movie night. The closeness of the Antarctic community contrasts strikingly with the wider feeling of isolation from the outside world. Photograph by Marc Neveu, 2018.

12

2.7 Ross Island, and in particular Hut Point, holds particular historical significance. The legacy of the Heroic Era of Antarctic exploration is exquisitely preserved here – sleeping bags, biscuits and seal carcasses that remained untouched for 100 years. Discovery Hut, built by Scott during the Discovery Expedition of 1901–4, served as a storehouse, living space, staging point and refuge during four British expeditions in the early 1900s. A cross marks the memory of Seaman George Vince, the first person to die in McMurdo Sound in a tragic incident in 1902. Numerous other symbols of remembrance scatter the

	landscape and serve to uphold the achievements and	
	tragedies of the Heroic Era. Photograph by James A.	
	Bradley, 2018.	13
2.8	Onboard the USCGC (United States Coast Guard Cutter)	
	Polar Star icebreaker. This old ship, commissioned in	
	1976, is our lifeline, slowly cutting a channel through the	
	thick sea ice to provide the only coastal access to McMurdo	
	Station. It is through this icy channel that a resupply ship	
	will arrive, a week or two later, restocking the station once	
	per year. The station stores enough food to support its	
	personnel for around three years – with built-in buffer	
	time in case impenetrable sea ice or giant icebergs block	
	access to the land. We are truly at the mercy of nature, but	
	this year, the ship did a good job. Photograph by James A.	
	Bradley, 2018.	14
2.9	Drilling ice cores to hunt for psychrophiles –	
	microorganisms surviving close to the cold limit of life.	
	Analyses of Antarctica's ice reveals hundreds of thousands	
	of microscopic organisms surviving, or perhaps even	
	thriving, while trapped in the ice. Analyses of the samples	
	collected will generate new knowledge and understanding	
	about the limits to life on our planet, and its resilience to	
	climate change, the effects of which are enhanced in	
	Earth's polar regions. Photograph by Thomas Boothby,	
	2018.	15
2.10	Scientists working at the sea ice edge are interrupted by an	13
2.10	inquisitive orca, surfacing from where instruments were	
	deployed just moments ago. Working in the southern	
	continent, I feel truly connected with nature, and have	
	been stopped dead in my tracks in amazement on a	
	number of occasions – as this photograph captures.	16
	Photograph by Virginie Galindo, 2018.	16
2.11	Inquisitive Adélie penguins pose for a photograph in front	
	of the southernmost active volcano on Earth, Mount	
	Erebus. Smoke can often be seen billowing from its	
	summit. Adélies can be extremely curious creatures, often	
	making a beeline to check out a group of scientists	
	working in the distance. It is our delight to see a waddle of	
	penguins slide over to us, stop for a moment to observe us,	
	and then carry on their journey. Photograph by James A.	
	Bradley, 2018.	17

2.12	This curious Adélie penguin shrugs off the bitter cold and vicious wind, unlike the enthralled polar scientists it has	
2.13	stumbled on. Photograph by Thomas C. Boothby, 2018. Scientists are truly at the mercy of nature, as a seal makes our sea-ice drillhole into its new home. This forces us to abandon sampling, to be replaced by a wildlife safari. We are guests in this icy land. Photograph by Marc Neveu, 2018.	18 19
2.14	Antarctica is a back-country paradise. Fat tyre bikes or skis	
	are used to cross the ice shelf to reach the mountain	
	slopes. Outdoors in the wilderness, I am acutely aware of	
	the physicality, and dare I say spirituality (see Chapter 8),	
	of being in Antarctica. Antarctica is a sensory overload of	
	soft and squeaky snow underfoot, cold air on bare cheeks,	
	whistling wind in ears, and sights of splendid scenery and wildlife. Photograph by Marc Neveu, 2018.	20
2.15	Castle Rock. Twenty-four hours of daylight during the	
	Antarctic summer screams out as an opportunity to ski in	
	the midnight sun. Flags mark a crevasse-free route across	
	the glacier. On this glacier, looking across the sound and	
	mountain ranges, feeling the cold and squinting in the	
	brightness, it is impossible to shake the sense that this	
	place is truly otherworldly. Photograph by James A.	0.1
0.16	Bradley, 2018.	21
2.16	A fixed rope assists climbers to reach the summit of Castle	
	Rock. On a clear day, climbers are rewarded with breathtaking uninterrupted views of the smoking summit	
	of Mount Erebus. With the opportunity for adventure	
	comes an unshakable sense of responsibility. We are	
	trusted out here to make smart decisions. Our safety is	
	largely in our own hands. We know that help might not be	
	available if we call for it. This instils a sensibility of respect	
	for the environment we call our workplace and	
	playground. Photograph by James A. Bradley, 2018.	22
2.17	One learns to keep a close eye on the weather in Antarctica.	
	On the southernmost tip of Ross Island, look across the	
	sound and see mountains in the south. As a general rule, if	
	the distant peaks disappear from view, a storm is coming in	
	and it will usually be on you in a matter of hours. If the	
	islands in the foreground then disappear, seek immediate	•
	shelter. Photograph by James A. Bradley, 2018.	23

23

2.18	'Apples' are strategically placed for those seeking respite	
	from the cold, the high winds and the general	
	unpredictability of weather on the Ross Ice Shelf. The US	
	Antarctic Program uses a three-tier classification system	
	for Antarctica's weather, ranging from category 3 (least	
	severe) to category 1 (most severe). The extraordinarily	
	low temperatures, high winds and low visibility that give	
	rise to category 1 weather are not to be taken lightly.	
	These conditions will often shut down the operation of	
	entire stations for days at a time. Photograph by James A.	
	Bradley, 2018.	24
2.19	No country owns any piece of the Antarctic continent.	
_,,,	Therefore, Antarctica has no official flag. Antarctica's	
	flaglessness captivates the imagination of schoolchildren	
	across the world, who are annually tasked to design their	
	own flag (see Chapter 11). Polar researchers bring these	
	creations to Antarctica and capture a photograph of the	
	students' flags amid the snow and ice, to instil the essence	
	of Antarcticness from the ice into classrooms all around	
	the world. Photograph by James A. Bradley, 2018.	25
2.20	The constant movement of ice shelves, the formation of	20
2.20	annual sea ice, and the sheer sparseness of human	
	habitation means that every footstep is on untouched	
	ground. Every ski sets out fresh tracks. All sense of scale is	
	lost against a backdrop of towering masses of ice.	
	Photograph by Marc Neveu, 2018.	26
2.21	Inquisitive orcas spy hop and breach at the ice edge.	20
2,21	Behind, a dazzling mirage creates the illusion of ice cliffs	
	hovering freely above the open sound. This alien	
	landscape becomes even more otherworldly as nature puts	
	on a show. Photograph by Marc Neveu, 2018.	27
2.22	A seal rests on its icy bed. A strong sense environmental	47
2,22	stewardship and responsibility is instilled in all aspects of	
	Antarctic life. The need to minimise one's impact is	
	implicitly understood. Wildlife must not be disturbed. No	
	trace should be left behind. The natural stillness is	
	preserved. Photograph by Marc Neveu, 2018.	28
2.23	Often I have the impression of standing in between two	40
د2.4	circular discs. An endless blue disc circles above me.	
	Underfoot, a crunchy white disc stretches out to the	
	horizon. Most directions I turn, I'm looking more or less	
	morizon, wost unections i turn, i in looking more of less	

	north. No matter where I walk along the horizontal plane,	
	the discs above and below me stretch on outwards into an	
	endless expanse. It's truly disorienting and magical at the	
	same time. Photograph by James Bradley, 2018.	29
2.24	Despite the continuous daylight and endless fields of ice,	
	at some point an end is called to the day. Sample boxes are	
	full and equipment is packed, and I am grateful for a direct	
	helicopter ride to the warmth of the station's laboratories,	
	stopping first at the 24-hour pizza bar for some	
	nourishment. The constant daylight can upset sleep and	
	cause overwhelming tiredness, but it can also be truly	
	energising. Nothing beats a ski to Castle Rock underneath	
	the dazzling midnight sun. The extreme cold can have you	
	longing for warm summer days, but the bitterness has you	
	feeling more alive than ever. The dryness of Antarctica's	
	climate chaps lips, and static shocks await on every door	
	handle in town. It also produces dazzling clear skies,	
	shimmering mirages and an extraordinary freshness in	
	breathing the air. In Antarctica we are completely isolated,	
	yet our community is closer than nearly anywhere else. We	
	live in a mining-like town amid pristine natural beauty.	
	Photograph by Marc Neveu, 2018.	30
3.1	Sign 'Ushuaia, end of the world'. Photograph by Gabriela	
	Roldan, 2018.	32
3.2	Sign with distances to Antarctica in Ushuaia's port.	
	Photograph by Gabriela Roldan, 2018.	37
3.3	General Pujato's bust in Ushuaia's Antarctic Pioneers lane.	
	Photograph by Gabriela Roldan, 2019.	38
3.4	Sign welcoming travellers to Punta Arenas indicating the	
	city's Antarctic connection. Photograph by Gabriela	
	Roldan, 2019.	40
3.5	The entrance to Chile's National Antarctic Programme	
	headquarters in Punta Arenas is marked with a map that	
	highlights the city's advantageous proximity to Antarctica.	
	Photograph by Gabriela Roldan, 2019.	42
3.6	Captain Scott's statue reinstated to its plinth in	
	Christchurch. Photograph by Gabriela Roldan, 2017.	44
3.7	Mural in central Christchurch titled 'Crevasse', by Oi YOU!	
	street art. Photograph by Gabriela Roldan, 2021.	46
3.8	Banners promoting Hobart as the gateway to Antarctica.	
	Photograph by Hanne Nielsen, 2019.	48

3.9	Antarctic and Southern Ocean Coalition-sponsored mural	
	painted in Hobart during the Commission on the	
	Conservation of Antarctic Marine Living Resources	
	meeting. Photograph by Hanne Nielsen, 2019.	50
3.10	Members of the public bid farewell to South Africa's polar	
	ship in Cape Town. Photograph by Gabriela Roldan, 2019.	52
3.11	A distance sign in the popular Victoria & Albert waterfront	
	shows Antarctica is closer to Cape Town than locals	
	imagine. Photograph by Gabriela Roldan, 2019.	52
7.1	Flags. Photograph by Rosa Jijón, 2013.	109
7.2	<i>Tribute to Hurley</i> . Photograph by Rosa Jijón, 2013.	109
7.3	Tribute to Hurley. Photograph by Rosa Jijón, 2013.	109
7.4	Tribute to Hurley. Photograph by Rosa Jijón, 2013.	110
7.5	<i>Tribute to Hurley</i> . Photograph by Rosa Jijón, 2013.	110
7.6	The Line. Photograph by Rosa Jijón, 2013.	111
7.7	The Line. Photograph by Rosa Jijón, 2013.	111
7.8	The Line. Photograph by Rosa Jijón, 2013.	112
7.9	The Line. Photograph by Rosa Jijón, 2013.	112
7.10	Risso Patron. Photograph by Rosa Jijón, 2013.	113
7.11	Risso Patron. Photograph by Rosa Jijón, 2013.	113
7.12	Risso Patron. Photograph by Rosa Jijón, 2013.	114
7.13	Risso Patron. Photograph by Rosa Jijón, 2013.	114
9.1	The Amundsen-Scott South Pole Station is a United States	
	scientific research station at the geographic South Pole,	
	Antarctica. Photograph by Wilson (Wai-Yin) Cheung, 2019.	131
9.2	Since interior Antarctica is rarely visited by human beings,	
	the presence of people drives the curious emperor	
	penguins to investigate who are they and what they are	
	doing. Photograph by Wilson (Wai-Yin) Cheung, 2015.	132
9.3	The halo is an optical phenomenon produced by light	
	(typically from the sun or moon) interacting with ice	
	crystals suspended in the atmosphere. Ice crystals can also	
	float near the ground under cold-weather conditions, in	
	which case they are referred to as diamond dust. Thus, the	
	halo is often found in the polar regions. Photograph by	
	Wilson (Wai-Yin) Cheung, 2019.	135
9.4	On the top of Antarctica – Mount Vinson at 4,892 metres	
	(16,050 feet). A surreal experience gives a view of the	
	endless white landscape from the highest peak on this	
	frozen continent. Photograph by Wilson (Wai-Yin)	
	Cheung, 2015.	135

9.5	Extreme weather conditions often happen during	
	Antarctic expeditions. Photograph by Wilson (Wai-Yin)	
	Cheung, 2019.	137
9.6	Extreme cold conditions strengthen affective relationships	
	between humans, but also with the more-than-human	
	world. Photograph by Wilson (Wai-Yin) Cheung, 2019.	137
9.7	Rare good weather during the expedition on the Weddell	
	Sea ice shelf, Antarctica. Photograph by Wilson (Wai-Yin)	
	Cheung 2015.	138
9.8	At the frontier of discovery in the Antarctic wilderness, we	
	always reflect on the questions Who am I? Why am I here?	
	and How can I process it? Photograph by Wilson (Wai-Yin)	
	Cheung, 2015.	141
10.1	Sitting with togetherness. Photograph by Oli Sansom,	
	2016.	146
10.2	A journey between sea and sky. Photograph by Stephanie	
	Langerock, 2019.	148
10.3	Antarctic silence, sunshine and beauty. Photograph by	
	Betty Trummel, 2016.	151
10.4	An Adélie penguin's journey at Paulet Island. Photograph	
	by Anne Charmantier, 2019.	152
10.5	The Gullet. Photograph by Hannah Laeverenz	
	Schlogelhofer, 2018.	153
10.6	The art of ice. Photograph by Anne Charmantier, 2019.	157
11.1	Members of the Mass2Ant research team, including	
	co-author T.J. Young (last on right), showcase flags sent	
	from Hunwick, Cedars and St Nicholas Primary Schools	
	(UK) at their ice coring site on the Roi Baudouin Ice Shelf.	
	Photograph by Nadine Mattielli, 2017.	160
11.2	Flags from 30 countries are displayed by members of the	
	Bulgarian and Spanish Antarctic expeditions at the	
	Spanish Juan Carlos I Antarctic research station.	
	Photograph by Nedelcho Hazurbasanov, 2015.	160
11.3	Flags are displayed on the Ronne Ice Shelf from students	
	from Escuela 163 'Japon' (Bolivia), Hollybank Primary	
	school (UK) and Woodford Primary School (UK).	
	Photograph by Rachel Tilling and Isabel Nias, 2018.	161
11.4	Annual workflow of the Antarctica Flags project. Image by	
	T.J. Young, 2021.	166
11.5	Flags have been sent to Antarctica from all countries	
	highlighted in red. Image by Sammie Buzzard, 2021.	167

11.6	Final flag destinations on and surrounding the Antarctic	
	continent. Locations do not include temporary field	
	camps. Cruises are collectively represented and not	
	spatially projected. A * means that the base or camp is	
	operated by non-governmental organisations or private	
	companies. Image by T.J. Young, 2021.	167
11.7	During 2020–1 when Antarctic travel was severely limited	
	due to the Covid-19 pandemic, those who were still	
	travelling stepped up to take as many flags as possible.	
	Here, a flag carried by Povl Abrahamsen (British Antarctic	
	Survey) from Ramsey Academy (UK) is displayed next to	
	the remnants of the huge A-68 iceberg which was	
	originally larger than the state of Delaware. The iceberg	
	made media headlines in 2017 when it broke away from	
	Antarctica's Larsen C Ice Shelf. Photograph by Alice	
	Marzocchi and Yvonne Firing, 2021.	168
11.8	Students at Jaifar Ibn Al Julanda School (Oman) prepare	
	their flag designs. Photograph by Julie Hambrook	
	Berkman, 2019.	170
11.9	Marianne Karplus and Galen Kaip (University of Texas, El	
	Paso, USA) display flags from Red Rose Primary School	
	(UK) in front of one of the US Antarctic Program's Twin	
	Otters at the Lower Thwaites Glacier Camp, one of several	
	stations supporting the International Thwaites Glacier	
	Collaboration. Photograph by Marianne Karplus and	1 77
11 10	Galen Kaip, 2018.	177
11.10	An example of a certificate from the 2015–16 campaign, signed by deployed members of the UK Antarctic Heritage	
	Trust at Port Lockroy, Antarctic Peninsula, and returned to	
	St Andrews Primary School (UK). Image by the UK	
	Antarctic Heritage Trust, 2015.	178
11 11	Student flags produced by sixth-grade students of	1/0
	Centennial Academy, Atlanta, Georgia (USA). Photograph	
	by Sammie Buzzard, 2020.	179
12.1	The first Antarctic solargraph recorded on Goudier Island,	_,,
	Port Lockroy, Antarctica. Solargraph by Adele Jackson,	
	2015–16.	183
12.2	The package of pinhole cameras and installation	
	instructions supplied to each Antarctic research station.	
	Photograph by Adele Jackson, 2018.	185

12.3	The solargraph pinhole camera installation at the	
	Amundsen-Scott South Pole Station. Photograph by	
	Tim Ager, 2018.	186
12.4	COMNAP Antarctic facilities map showing the pinhole	
	camera installation locations. Map reproduced with	
	permission of COMNAP, 2021.	187
12.5	Mario Zucchelli Research Station, Northern Foothills,	
	Victoria Land, Antarctica. Solargraph by Adele Jackson,	
	2017–18.	188
12.6	One of five international Antarctic gateway cities. Ushuaia,	
	Tierra del Fuego, Argentina. Solargraph by Adele Jackson,	
	2017–18.	189
12.7	Palmer Station, Anvers Island, Antarctica. Solargraph by	
	Adele Jackson, 2018–19.	190
12.8	Anemometer tower at Base A, Historic Site and Monument	
	(HSM) No. 61, Goudier Island, Port Lockroy, Antarctic.	
	Solargraph by Adele Jackson, 2018–19.	191
12.9	Scott's Hut, HSM No. 16, Cape Evans, Ross Island,	
	Antarctica. Solargraph by Adele Jackson, 2017–18.	192
12.10	Arrival Heights Laboratory, Scott Base, Ross Island,	
	Antarctica. Solargraph by Adele Jackson, 2018–19.	193
12.11	Base E, HSM No. 64, Stonington Island, Marguerite Bay,	
	Antarctica. Solargraph by Adele Jackson, 2017–18.	194
12.12	Amundsen-Scott South Pole Station, South Pole,	
	Antarctica. Solargraph by Adele Jackson, 2018–19.	195
12.13	Presentation of Antarctic Sun Lines at Christchurch Art	
	Gallery Te Puna o Waiwhetū, 2–6 October 2019.	
	Photograph by Adele Jackson, 2019.	196
12.14	The solar power system used in the exhibition of <i>Antarctic</i>	
	Sun Lines is shown here being used in Antarctic	
	cryospheric fieldwork on the McMurdo Ice Shelf.	
	Photograph by Wolfgang Rack, 2014.	197
14.1	The authors on board the Spanish research vessel	
	Hésperides from King George Island to Greenwich Island in	
	December 2019. The weather and sea conditions were	
	pleasant on that day, but such conditions are also subject	
	to change. Photograph by Yu-Fai Leung, 2019.	214
14.2	Site management actions taken by tour operators to	
	minimise disturbance to wildlife and improve safety for	
	visitors at Port Charcot. The black path was set up	
	temporarily for tourists to walk on the ice safely. Flags	

	were used to mark the path for tourists to follow in order	
	to delimit the trampled areas. The tourists on this visit	
	were compliant with all site guidelines. Photograph by	
	Daniela Cajiao, 2020.	217
14.3	The authors conducting a field experiment and observing	
	the behaviour of chinstrap penguins on Barrientos Island.	
	Photograph by Yu-Fai Leung, 2020.	220
16.1	The volcanoes of the South Sandwich Islands (all	
	photographs by Emma J. Liu, 2020 except for (b and h)):	
	(a) Zavodovski; (b) Saunders, showing a substantial gas	
	plume emanating from the summit of Mount Michael, by	
	Tom Hart, 2020; (c) Candlemas, showing the volcanically	
	active Lucifer Hills peninsula, constructed from multiple	
	lava flows; (d) Candlemas, featuring the extinct volcanic	
	centres of Mount Perseus and Mount Andromeda, both	
	now heavily glaciated; (e) Freezland Rock, the first	
	landing sighted in the South Sandwich by Cook in 1775;	
	(f) Serenity in the Douglas Strait, between the islands of	
	Thule and Cook; (g) Cook; and (h) Bellingshausen, by	
	Tom Hart 2020.	247
16.2	Volcanic crater of Mount Curry/Mount Asphyxia,	
	Zavodovski in (a) 1961, image courtesy of P. Kennett	
	aboard the RRS Shackleton; and (b) 2020, Emma J. Liu.	
	View of the western coast of Zavodovski through time, in	
	(c) 1819, a drawing by expedition artist Pavel Mikhailov	
	during Bellingshausen's expedition, reproduced from	
	Debenham 1945; (d) 1961, image courtesy of P. Kennett	
	aboard the RRS Shackleton; and (e) in 2020, Emma J. Liu.	250
16.3	The <i>Pelagic Australis</i> , our home for the six weeks of the	
	expedition: (a) At anchor in Salisbury Plains, South	
	Georgia, by Emma J. Liu, 2020; (b) Calm sailing near	
	Clarke Rocks, South Georgia, by Emma J. Liu, 2020; and	
	(c) Navigating a strong swell in the South Sandwich	
	Islands, by Skip Novak, 2020.	252
16.4	Icebergs vary considerably in size and morphology (all	
	photographs by Emma J. Liu, 2020, except for (a)): (a)	
	Inclined tabular iceberg offshore of Saunders Island, by	
	Kieran Wood, 2020; (b) Many bergs close to shore become	
	a haven for offshore colonies of penguins; (c) Tall iceberg	
	just offshore from Zavodovski, exhibiting an almost	
	translucent blue colour; (d) Large tabular berg sighted far	

	from land; (e) A sea strewn with icebergs and bergy bits,	
	viewed from Bellingshausen Island.	255
16.5	Scientific activities and sampling techniques (all	
	photographs by Skip Novak, 2020): (a) Summit attempt	
	on Mount Michael, Saunders Island, before being turned	
	around by the blizzard conditions; (b) Measuring sulphur	
	dioxide emission rates on Saunders Island using an	
	ultraviolet camera; (c) Shore landing by zodiac on	
	Saunders Island; (d) Shore landing on Bellingshausen	
	required swimming ashore attached to a rope line; (e)	
	Gazing into the deep volcanic crater on Bellingshausen,	
	the gas emissions from the numerous active vents are	
	clearly visible; and (f) The rope-line shore landing was	
	required again for Candlemas Island.	256
16.6	Wildlife of the South Sandwich Islands and South Georgia	
	(all photographs by Emma J. Liu, 2020 except for (f)): (a)	
	King penguins, Salisbury Plain, South Georgia; (b)	
	Chinstrap penguins, Saunders Island, South Sandwich; (c)	
	Elephant seals, Saunders Island, South Sandwich; (d)	
	Gentoo penguins, Cooper Bay, South Georgia; (e) Weddell	
	seal, Saunders Island, South Sandwich; (f) Albatross,	
	South Georgia by Ted Cheeseman, 2020; (g) King	
	penguins, Salisbury Plain, South Georgia; and (h) Fur	
	seals, adults and pups, South Georgia.	262
17.1	Glacier Twilight. Painting by David Rosenthal, 1999.	271
17.2	Iceberg Twilight. Painting by David Rosenthal, 1999.	272
17.3	Gatlin Glacier and Icefall. Painting by David Rosenthal,	
	1996.	273
17.4	Moon Over Ice Shelf Painting by David Rosenthal 1992	2.74

List of tables

4.1	The ABC of effective teamwork in Antarctic teams.	64
11.1	Participation statistics in the Antarctic Flags project since	
	2015 (from UKPN's records).	166
18.1	Axes of Antarcticness.	276

Togetherness for Antarcticness

Madeleine G. Hann, Kristina Baltutis, Natalie Barefoot, Anne Charmantier, Anna Colucci, Carole Durussel, Amie Figueiredo, Stephanie Gardner, Hannah Laeverenz Schlogelhofer, Stephanie Langerock, Anna Madlener, Cindy Shellito, Karen Spenley, Betty Trummel and Priscilla Wehi

Homeward Bound is a ground-breaking, global leadership training programme for women in STEMM (science, technology, engineering, mathematics and medicine) with a close bond to Antarctica. Homeward Bound aims to heighten the influence and impact of women in making decisions that shape our planet by training a thousand women over ten years. As of December 2020, the Homeward Bound network comprised 410 women representing 45 nationalities. We are united in the knowledge that we are stronger together, we are able and willing to lead, and we are taking action with impact.

Each woman has her own story. At the time of writing, four cohorts of women in the Homeward Bound programme have travelled to Antarctica, and a fifth cohort are waiting to find out if this will be a reality for them. The programme includes a year of remote learning followed by a three-week Antarctic expedition. But what we discover and our relationship to Antarctica is entirely individual. In this chapter we could not hope to represent all experiences, but we aim to share the essence of our story through a blend of individual and shared memories, and a collective feeling of Antarcticness. We invite you to join us on our leadership journey and expedition to Antarctica.

Embarking

What would send you to Antarctica? Maybe you are captivated by stories of early twentieth-century explorers, of walls of ice that rise up from blue waters, and rugged chocolate-brown mountains capped with ice dunes. Perhaps it's the stories of the creatures that capture your imagination – the penguins that huddle on their rocky nests until it's time to feed, then glide gracefully through the water, leap into the air and dive down again as they fish; the whales and dolphins that soar through blue waters in a world that is relatively untouched by humanity. Or maybe it's something else entirely – the yearning to connect with a group of like-minded individuals from around the world, eager to make a difference in a world that suffers from too much need and too much greed. Maybe it's the stillness inside you that speaks softly, saying: 'This is your time.'

We are the women of Homeward Bound. We are mothers, daughters, partners, sisters and friends. We are scientists, technologists, engineers, mathematicians and medics. We come from around the world to learn from each other, to empower each other, to support each other. Together, we want to lead a new way on this planet. As we gather in Ushuaia, Argentina to board a ship for Antarctica, we invite you to join us on our journey.

A trip to somewhere so far from our experience, our homes and our families is not easy, no matter where we start our journey – even in the twenty-first century. There is a fluttering in our stomachs as we sit at our departure gate. There are long hours of waiting, then running, passport lines and another flight. There are delays and some missed connections (see Chapter 14). But there is a conviction. This is where we need to be. Right here. Right now.

We have gathered from many corners of the world, and we are connected by science, conservation, activism and much more. We have all been navigating our lives and careers in a world built for men – often alone, struggling to balance work and family and the challenges of life. We have spent the past year learning from and about each other. Our programme has helped us to understand how we interact with others and the barriers to making our work visible in the world. We have reflected on how we hope to have an impact on the planet, and most importantly, how we are stronger together in the face of global challenges.

Beneath the still-snow-capped Patagonian peaks that stand above Ushuaia, we begin to open our hearts and minds to new ideas and new ways of thinking. We are about to board a ship together for three weeks



10.1 Sitting with togetherness. Photograph by Oli Sansom, 2016.

in Antarctica. We are gathered in a conference room at a hotel, with large picture windows overlooking the grey waters of the Beagle Channel. It feels like a hive. We are buzzing with new energy and anticipation of the icy world that awaits us.

Mother Nature, Pachamama, Mutter Natur, Moder Jord, Moeder natuur, Móðir jörð, Dame Nature, Madre Naturaleza, Papatūānuku, Parameshwari, Priroda and 大自然 (da ziran) are just some of the words we have to describe nature and its power. Each of these names has its own unique history and meaning, and some are strongly political. We learn that language is powerful, for leading and driving change. We choose how we use our language. It also poses challenges on the ship, as we are operating in English. This is a second, third or even fourth language for many participants. Some words cannot be translated. This reminds us of the importance of our diversity. If only this could be reflected in global leadership.

As with any journey among new friends, ground rules and insights about our group will help us build community. We consider our personal boundaries, our responsibility to each other, and how we will support each other on the journey. We move around the room sharing names and stories, and ultimately find ourselves shifting tables and chairs aside to sit on the floor, closer together, in solidarity and excitement (Figure 10.1). We take time to consider our strategies for navigating life, our visibility

(to ourselves and others), and what it might mean to be leaders, and to lead as women.

The fact is, we are all leaders. We have a lot to learn. We want to lead, to inspire, to connect and to mentor. Faced with the immensity of Antarctica, we are trying to find a new way forward. We hope Antarctica will take us there.

As individuals, we are always finding our way through life, and sometimes the path becomes clear in our scariest moments. As a global community, we are traversing a scary moment in time – a moment characterised by declining natural resources and climate change and increasing polarisation. It is curious that 'polarisation', the sharply opposing views of extreme groups, is so far from the unity and clarity the poles can create through Antarcticness and Arcticness. We need to function as a global community to find a way forward, and each of us has a role to play. We want to take Antarctica with us.

The moment has arrived to embark on the journey. Are we ready? What baggage will we be willing to shed as we cross the ocean and enter a different world? What will we leave behind, so something new can blossom in its place? All these things go through our minds as we enter the belly of the ship and settle into the container of our voyage.

Crossing

We now leave Ushuaia behind us. The ship navigates along the Beagle Channel and out into the infamous Drake Passage. We venture south.

The Drake Passage is a point of convergence: a point of connections, crossovers and transitions. It is the body of water that reaches from Cape Horn in Chile, the southernmost tip of South America, to the South Shetland Islands at the northern point of the Antarctic Peninsula. It is the place where the Atlantic, Pacific and Southern Oceans meet. This place of in-betweens is the most treacherous part of our journey (Figure 10.2).

At this latitude, there is no land. Here, the currents that swirl around the Antarctic continent meet no barriers, meaning that this is considered one of the most challenging voyages a ship can make. What will we encounter? Some voyages are greeted by the relatively tame Drake Lake. Others must face the notorious Drake Shake, where waves can tower more than 10 metres high. Whatever hand we are dealt, the challenges of uncertainty and instability are ever present.

We are full of excitement and anticipation. Out here, there is no phone signal and no internet. We are learning to live at the pace Antarctica sets for



10.2 A journey between sea and sky. Photograph by Stephanie Langerock, 2019.

us. Unlike the South Pole explorers, we are not here with the idea to conquer this vast continent. We are here to learn whatever it may teach us.

We pause and remember to trust in the journey. To be patient if insights don't happen quickly. Be present. Be open. Notice our feelings and thoughts. Give ourselves time to not know and embrace this sometimes uncomfortable feeling. Give ourselves space to breathe and truly take things in.

Today is a day of floating and drifting. Rocking and swaying. The boat seems to move more than the waves. While some of us stumble around the ship finding our sea legs, drowsy from seasickness medication, others stay in their cabins, hardly able to move, riding the waves. We are a point in the ocean. Looking out at the blue expanse stretching before, behind and around us, we feel both small and emboldened. The sense of our own smallness is a humbling experience.

During our crossing, conversations with fellow expeditioners help some of us recognise assumptions about ourselves and how we hold ourselves back. This is the beauty of being in a diverse group where a genuinely safe space has been established. We all see the world differently, but, we realise, Antarctica strips away the layers of our outer shell so we understand ourselves as we really are.

As the norms of human society fade, we tune into our inner voice. It can feel selfish to focus on yourself, but this time is important. Being clear

on your own sense of self, what you believe in and what is important to you, helps you to focus your two most precious resources: time and energy. Understanding yourself is also a strong base from which to recognise and value the diversity in others. This is at the heart of progressive, compassionate leadership.

We are now in the moment after the beginning. There is no turning back. The moment when the journey becomes real. The moment after the anticipation, when the real challenges of the journey start to reveal themselves. Together we support each other through any discomfort, knowing that challenge can reap rewards. We muster the courage to step forward into a world unknown to many of us. To forge a different path. We venture into this unknown to create a better world, a better way of being and thinking, a better way of leading. Together.

Arriving

After two days and nights crossing the Drake Passage, we find ourselves on the upper deck of the MV *Ushuaia* for a breath of fresh air that bites our cheeks. The sky is milky blue and we let our gaze drift to the horizon, the edge between sky and Earth, the thin line between ocean and sky. At some point, while we were trying to sleep, we crossed the Southern Convergence Zone, another edge at the end of the world. This is the place where warm currents from the Southern Ocean encounter Antarctic waters. An oceanic weather front. A defining boundary between Antarctica and the rest of the world. The sharp shift in ocean temperatures changes the world – the air is dryer and colder, and the sky is endless on this clear day.

In a different life, we might have seen the Convergence in the bright light of day. We would have seen the change in the exploration and adventure. The steady hum of the ship's engine has become a comfort at this point.

We look out across the sea – and there it is! A break in the horizon. As the ship moves forward, it grows larger – our first iceberg! Soon there are gentoo penguins porpoising through the water, and it feels like another planet. Seeing our first penguin in Antarctic waters is a special moment on the journey. Everyone reacts differently. Daisy and Marina are standing at the bow of the ship. One is laughing and the other has tears glistening down her face. These two women in STEMM, so far from home, brought together by their separate experiences. Everyone always asks about the penguins, and now, here we are.

Every one of us arrives in Antarctica with a set of expectations. Some of us have come from icy winter climates, some of us from tropical cities. But we all have an idea of what we want to encounter. The thing is, now we are here, circling an iceberg the size of a tower block, the reality has chased away any expectations we had in mind. At the same time, other expectations fall away. Expectations of ourselves, our friends and family, our boss, our culture, our society. We wonder what Antarctica will ask of us.

Exploring

Antarctica has been part of my imaginings for many years. And now, finally, I am here and we are here, as Homeward Bound. It is both we and I. For me to be part of Antarctica, and Antarctica to be part of me.

I see Ana and Uxua walking around the ship, fast, breathing and smiling. The snow falls so their footprints are tracked as they walk to the bow. There are still humpback whales breaching alongside. I look up, and see Susan on the bridge, chatting to the captain about the weather, and perhaps the universe, as that is something she knows about, having studied it deeply for many years. Gravitational waves, space, sea, wind. It all feels linked. I attempt to meditate outside in the cold. I don't want to let a single moment of this journey pass by unnoticed. I can't think of anything except how cold my fingers are. I can hardly bear to go inside. The desire to feel the weather is intense. A few days ago, Mel told me that adventure is one of her values. I identified mine confidently as community and justice. But now I realise, 'yes!' adventure is in me too. I didn't see it before.

If the conditions are right, the crew will ferry us ashore in inflatable boats. As the boat slides up a gravelly bank, we learn to swing our legs over the edge and step into the water, then up to the shore. All of our landings require emerging from the water, as though we are sea creatures tentatively setting foot in a place that feels new and strange. On many of our landings, we are greeted by the cacophony of penguin chatter. They pay no attention to us – intent on going about their business of scuttling down to the water to fish and taking care of their chicks. We stay out of their way on designated paths.

On Danco Island, we hike up a hill past a nesting colony of gentoo penguins. At the top of the island, the penguin chatter fades, and in the absence of the steady hum of our ship, we immerse ourselves in Antarctic silence – for a moment. There is some shuffling as we shed heavy parkas



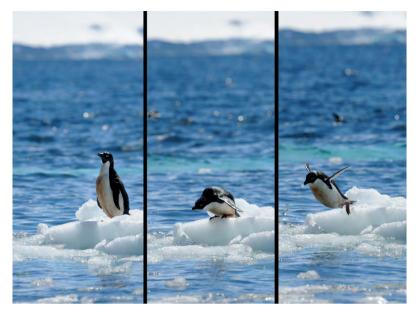
10.3 Antarctic silence, sunshine and beauty. Photograph by Betty Trummel, 2016.

in bright Antarctic summer sunshine and a temperature approaching 10°C. And then, in the moment when we hold our collective breath to soak in the silence and sunshine (Figure 10.3), there is a distant rumble. A low roar of ice crumbling and crashing. A few moments later, there is another. And then another. This is the sound of glaciers breaking – a normal occurrence in Antarctic summer, but an echo of climate change on the least inhabited continent on Earth.

Shore landings: time to investigate and learn, and take in pristine land and seascapes. Travelling in a little boat through such a surreal environment is indeed magical – every sight and sound magnified, the cold air feeling both biting and exhilarating.

We are surrounded by a panorama of steep cliffs gleaming in the light, or massive glaciers spilling right down to the sea. I hear the groaning and creaking of the glacial ice, an indication that at any moment crevasses will give way, and chunks of ice will topple into the sea. Mountain tops look like they are covered with folds of whipped cream or slathered with vanilla icing, thick and smooth.

I take time to meander along the shore and stop to sit on rocks or piles of snow. Gulls and terns glide overhead. 'Bergy bits' drift by. Penguins gallivant in and out of the water (Figure 10.4), their quirky



10.4 An Adélie penguin's journey at Paulet Island. Photograph by Anne Charmantier, 2019.

style and movement on land so different from their smooth gliding and turning about in the water. Seals also greet us, seemingly awkward on land; their adaptations for adept movement in the ocean are key to survival.

I bend down to investigate life in a tide pool, marvelling at the tiny fish and crustaceans frantically darting about in the harsh environment here. I contemplate the importance of every single member of the complex Southern Ocean food web.

We are in a tiny ship and I often feel alone in the vast Southern Ocean. This amazing continent and the islands in the Antarctic Peninsula are ever changing, depending on the day, the light and the landing spot. It is all unique and extraordinary. I'm mesmerised by what I've seen each day of this voyage.

But things do not always go to plan. As we head south, down into the Antarctic Circle, it becomes clear there is too much sea ice to navigate the Gullet in Laubeuf Fjord, to reach Rothera, the British Antarctic Survey's research station. Ice reaches from one side of the Gullet to the other, and there is no apparent break, even this late in the season (Figure 10.5). We are faced with a choice. We can go, but we will have to endure an alternative path, around the outside of Adelaide Island in rough seas. Or we can turn



10.5 The Gullet. Photograph by Hannah Laeverenz Schlogelhofer, 2018.

back. Maybe this is a step too far outside our ability to cope, an edge we are unable to cross. The group splits in two. There is uncertainty, and heated discussion. Severe seasickness is a very real fear and danger, but this is a once-in-a-lifetime chance to visit Rothera. Many of us long for the adventure, to take flight like albatrosses skimming through the sky, but others are grounded and fold their wings, believing the risk is too great. Overcoming fear takes real courage, but so does acceptance that sometimes we cannot have what we most desire. Finally, the decision is taken out of our hands and the captain announces we are going to Rothera. But it is a lesson. Sometimes we need to let go of what holds us back, as individuals and as a group (see Chapter 6). We reweave ourselves together and hold firmly.

Returning

One of the last stops of our ship full of women leaders, known affectionately by us as 'Ladyboat', is Deception Island. This is a perfect place for a freezing swim in the Antarctic waters – the polar plunge. Deception Island is an active volcano in the South Shetland Islands. The centre of the volcano collapsed 10,000 years ago and has been flooded by the sea. The collapsed caldera has given the island a horseshoe shape, allowing whaling ships, scientists and tourists to find shelter. But things are not so calm under the surface. More than 20 eruptions occurred in the

past two centuries, with the most recent one in 1971. We are warned that if an eruption starts, the seals and birds will be the first to leave, so we should keep an eye on the wildlife. Upon setting foot on Deception Island, we are struck by the beautiful black sand beach and the most unusual sight of a black glacier in the background, made of ash-layered ice.

Experiencing a polar plunge in such a lunar landscape is exhilarating, but is also a challenge for the body, since the water is around 1°C. Despite all the anticipation and planning for the plunge, it is an experience of high tension, with extreme physical and emotional stress, and overall quite a lot of screaming.

Back on the boat, we reflect on how our individual and collective reactions to this exciting event are relevant for our leadership journey. When facing stress, a good leader should be self-aware, but also be aware of the context, and of others. A polar plunge can be seen as any challenge we face in our lives, a challenge that requires courage, but also requires that we are attentive to others. Facing the challenge makes us proud as a group – we overcome the obstacle together.

And then we face the Drake Passage again. It is the necessary transition before we can return back to 'normal' life, to our families and our jobs. Over the edge again. Amidst our suffering from what we feel is a very rough crossing, i.e. 11 metre high waves and a ship tipping at 32°, our expedition leader Monika rates it at six out of ten. She does add a much more important exclamation: 'You are Antarcticans now!', and for us, this takes a deep meaning.

We feel this encounter with Antarctica has changed us in so many ways. It has changed our selves, brought us new knowledge and awareness, and enhanced our connection to our planet and our ambition to protect it. And perhaps it has changed others as well while we were away. An alteration in the family routine, a frustration from the parent left behind, a shift of who was in charge.

We share guidance on how to anticipate the change of coming back. Take small steps in the change, don't overwhelm yourself or others, go back to nature when you feel vulnerable, use love and humour (this book's cover photo). And finally, write down an 'elevator pitch' about Antarctica, because you will be asked how it was, and you will be at loss to summarise in a few sentences this glowing, infinite experience. We hope Antarcticness is something everyone can share.

This transition period back to South America allows us to look back at the impostor syndrome we all shared before becoming Antarcticans. So many of us were convinced that Homeward Bound would not select us, that Antarctica would remain a dream. Yet here we are, braving the waves

coming back from Antarctica. We are now ambassadors set to protect this remote, fragile and immense beauty. And we will stay stubbornly optimistic to protect it, because we are stronger together.

Land is now in sight and we are struck by the fact that icebergs are already so far away. Only yesterday, I could close my eyes and reopen them to the peaceful Antarctic beauty, yet now they are a memory or a photograph. When I close my eyes, I can see my home and my family.

Emerging

Going home to 'normal' life isn't always easy. Seeing our loved ones is wonderful, and so is finding the familiarity of our homes. Digesting everything we have experienced and learned can be hard. So is being confronted with sometimes hostile work environments. While we have all become ambassadors for Antarctica and we are determined to lead to protect it, we do it at our own pace and according to our path through life. Some jump right in to give presentations and keynotes from the day they return, while others need some time to cherish their experiences and wrap their heads around how to go about this. I am someone who needs to absorb the wonders, the beauty and the support of Antarctica and the sisterhood I felt on the ship first. Sometimes I was quite overwhelmed because I couldn't express the beauty and the magic of this experience while I really wanted to share it.

During a recent development conversation at work, I asked my head of department if they had noticed any differences since my return from Antarctica. The answer was 'Absolutely!' They said I had become a better version of myself and that I'm stepping up more regularly and more actively for the things I believe in. They could see I was really replying to Mother Nature's call for her daughters. I agree. I have become a better version of myself and I have become a more courageous leader. I am very much determined to keep giving Antarctica, Mother Nature and Mother Ocean the voice they deserve. A firm example of my determination is how I have been advocating for a green recovery since Covid-19 hit the world. I have invested a lot of time and energy to move this forward within our organisation and it has been completely worth it. While I was already leading and inspiring others before my participation in the Homeward Bound programme, I now own my leadership role.

It is very comforting to know that whenever we step up and we fall or fail, there is a group of women behind us to support us and to help us back up. Stronger Together and Stubborn Optimism have become life mottos. We, as women, need to step up for our values and beliefs. The worldwide health and environmental crises we are currently facing require compassionate, authentic and strong leadership. Together we can and we will build a more sustainable and inclusive future. What better way is there than to do this together and through the bonds we forged with and within Antarctica?

Imagining

We – the fifth Homeward Bound cohort – had planned to travel to Antarctica in November 2020. Due to the Covid-19 pandemic, our voyage has been postponed indefinitely and Antarctica remains in the realm of our collective imagination.

Antarctica has a unique power to ignite our imagination. Thinking of Antarctica allows us to believe in a different world, in the road less travelled. The idea of heading south with a group of like-minded, diverse, truly global women in STEMM has given birth to a strong sense of togetherness in our group.

Even without having been there, Antarctica represents a special place for us. An Antarctic expedition would not just be the adventure of a lifetime, but a unique opportunity for an inward journey. Antarctica inspires us to imagine new ways of collectively leading towards a sustainable future, sparks new ideas to tackle today's environmental challenges, and creates a sought-after sense of belonging in a disparate world.

Antarctica is a symbol of scientific research, but a place where not so long ago women were not even allowed to go. Every woman who goes there is balancing the books. Adventuring there together would create a bond for life, stretching the idea of a professional network of women in science towards a heartfelt convergence of minds.

It is one of the last uninhabited places on Earth and is particularly vulnerable to human activities and climate change. As we imagine, we are acutely aware of Antarctica's need for urgent protection. Antarctica, with its vast wilderness, gives us the perspective needed to confront the immense challenges ahead of us.

Antarctic wildlife is elegant, humble, strong and relentless – and so are we. The currents of the Southern Ocean are magnificent, yet fierce and unforgiving. Dreaming of Antarctic waters reminds us how small we are, but how powerful our impact can be and how humans contribute to



10.6 The art of ice. Photograph by Anne Charmantier, 2019.

its degradation and now to resurrection. As a team of women in STEMM, we are united in our obligation to protect it, along with our entire planet.

Antarctica nourishes the child-like wonder that captivates our imagination. It promises adventure and discovery in exchange for our curiosity, determination and willingness to accept that we are not in control. It draws us in with a mysterious magic that reminds us: we are part of something larger. It represents peace and collaboration, people from around the world working together, putting science and purpose above geopolitical boundaries. Antarctica represents the expanse of human ingenuity and our incredible opportunity to change the world for better or worse – depending on our choices.

Antarctica is like its icebergs (Figure 10.6), revealing only a portion of its majesty above the water. Our Homeward Bound journey is similar to the iceberg, in that we uncover ourselves and each other in this amazing depth and ability. We see in Antarctica the permission and the insistence to be our raw, free, unconstrained and strong selves. By embracing Antarcticness, we expect to embrace the harmony and balance within us and we bring it into the world. Antarctica gives us the inspiration to imagine the bond holding us, and the strength to make the world a better place, together.