

Antarctica: *Sonic Reckonings*

Lawrence English | Cheryl Leonard | Jay Needham | Douglas Quin | Philip Samartzis

Essay by Carolyn Philpott

Balance-Unbalance 2015 International Conference | Water, Climate, Place: Re-Imagining Environments
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*Be not afeard. The isle is full of noises,
Sounds and sweet airs that give delight and hurt not.
Sometimes a thousand twangling instruments
Will hum about mine ears; and sometimes voices,
That if I then had waked after long sleep,
Will make me sleep again; and then in dreaming,
The clouds, methought, would open and show riches
Ready to drop upon me, that when I waked
I cried to dream again.*

—William Shakespeare, *The Tempest*, 3.2.135–142

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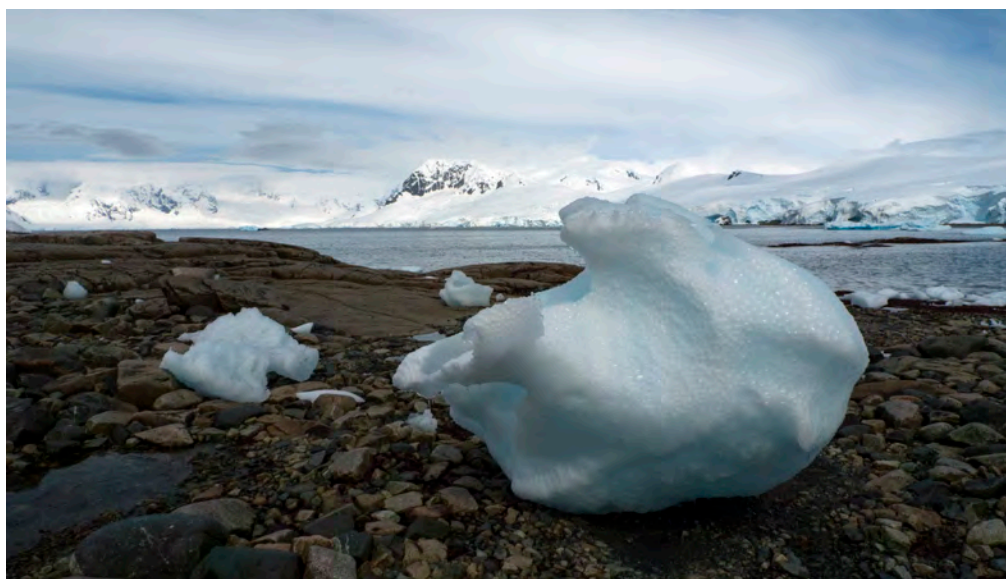
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Sonic Reckonings draws together contemporary compositions by five composers from two countries on opposite sides of the globe (the United States of America and Australia) who are united in their fascination with the sounds and environment of the world's southernmost continent, Antarctica. All five composers – Lawrence English, Cheryl Leonard, Jay Needham, Douglas Quin and Philip Samartzis – have visited the far south for at least one austral summer and then returned to their homelands with numerous field recordings and myriad ideas relating to how to share their experiences, in sonic terms, with an audience consisting primarily of people who have never been down to the ice. This concert, which connects with the theme of the Balance-Unbalance 2015 international conference (“Water, Climate, Place: Re-Imagining Environments”) in a multitude of ways, provides a rare opportunity to listen to these composers’ personal experiences and perceptions of Antarctica – the sounds of a place that for many centuries remained an unknown, *imagined* environment.

Antarctica is the coldest, windiest and driest continent on earth, with the highest average elevation (Convey 2014: 1; Wayman 2013: 19; Dastidar and Persson 2005: 1552). Given its extreme climate, it is perhaps not surprising to note that Antarctica is the only large landmass on Earth without a native or long-term resident human population and was one of the last parts of the planet to be fully chartered and explored. While it is surrounded by water – the Southern Ocean – the average annual precipitation in the interior of the continent is comparable to that of the world's hot deserts, leading many scientists to classify parts of the continent, such as the McMurdo Dry Valleys in southern Victoria Land, as ‘cold deserts’ or ‘polar deserts’ (Priscu et al. 1998: 2095). As a remote and inhospitable place that is not only geographically distant from the world's major cities, but is also generally far from the minds of the vast majority of people who live in them, the frozen



continent has had a long history of being treated as little more than a blank space at the bottom of the map. However, in recent years, the far south has begun to attract more widespread attention, especially as messages about climate change are being conveyed with greater frequency via the press, and through mediums such as television, film, literature, the fine arts and music. As scientific research conducted over the past few decades has shown, Antarctica and the Southern Ocean's unique and complex environmental processes play significant roles in driving and regulating the world's climate (Convey 2014: 1). The extremely cold water at the periphery of the continent sinks deep into the ocean and drives the circulation of currents across all the oceans, while the atmosphere above the ice is likewise central

to global atmospheric circulation. In addition, the Southern Ocean is very effective at absorbing carbon dioxide from the atmosphere, which is vitally important given that the current concentration of carbon dioxide in the atmosphere “exceeds any value measured in ice cores covering the last 800,000 years” (British Antarctic Survey 2015). The strong link between increasing carbon dioxide concentrations and rising temperatures have seen changes in climate occur on all continents and across all oceans on the planet and Antarctica itself

does not appear to be immune to the effects of global climate change, as perhaps first thought (British Antarctic Survey 2015; Wayman 2013). It has been widely reported that the Antarctic Peninsula and large parts of West Antarctica have warmed considerably over recent decades, which has led to the collapse of some of the region's smaller ice shelves. While natural environmental events also contribute to global climate change, according to the International Panel on Climate Change's fifth assessment report (2014), it is *extremely likely* that human activities have been the “dominant cause of the observed warming since the mid-20th century” (IPCC 2014: 4). For this reason, the British Antarctic Survey, among other organisations, has assert-

ed that “understanding Antarctica’s role in climate change is not only a huge scientific challenge but also an urgent priority for society” (British Antarctic Survey 2015).

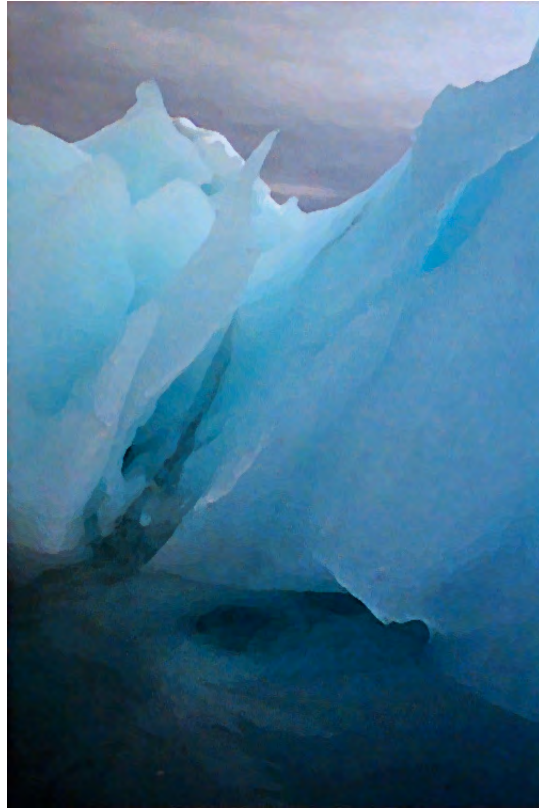
Since the Antarctic Treaty System came into force in 1961, Antarctica has truly become a “continent for science” and while scientific research is still the primary form of research associated with the region, there has been a steady rise of interest in Antarctic studies among scholars working in the humanities, social sciences and the arts over the past 100 years (Dastidar and Persson 2005; Hua, Li and Yuan 2013: 273). This is reflected not only in increases in the number of new articles published on topics related to Antarctica within these disciplines, but also in the appearance of new multi-disciplinary peer-reviewed journals dedicated to polar studies and a range of different conferences and other events exploring themes related to the southernmost continent. Growing numbers of artists, curators and composers are also working to “bridge the gap” between the arts and the sciences in relation to Antarctica and climate change (Gabrys and Yusoff 2012; Crossman 2014; Miles 2010; Allen 2013). These art forms are steadily gaining recognition as important methods through which information about critical issues such as climate change can be communicated to the general public. Music, in particular, has been identified for its unique capacity as a non-verbal language, and as a temporal art form, to have a “far stronger” impact on an audience than verbal messages about climate change alone (Moser 2010: 40). Of course, not all musical works composed in connection with climate change also reference Antarctica, and likewise, not all musical works composed in response to Antarctica make overt references to climate change.

A large number and variety of musical works have been composed in association with Antarctica since the dawn of the so-called Heroic Age of

Antarctic exploration in the late nineteenth century. These include, among others, various collections of occasional songs composed in Antarctica by explorers during the Heroic Age (Philpott 2012; Philpott 2013); a little-known twelve-tone opera by Schoenberg pupil Winfried Zillig based on the story of the demise of Lawrence Oates on Scott’s fatal expedition to the South Pole (*Das Opfer*, 1937, see Leane, Philpott and Nielsen 2014); and the large scale Antarctica-related orchestral works of British composers Ralph Vaughan Williams (film score for *Scott of the Antarctic*, 1948, and *Sinfonia Antarctica*, 1949-52) and Peter Maxwell Davies (*Antarctic Symphony*, 2000) and Australian composer Nigel Westlake (film score for the IMAX film *Antarctica*, 1991, and *Antarctica* suite for guitar and orchestra, 1992).

Since the final years of the twentieth century, a number of composers have had the opportunity to visit Antarctica and experience its environment (and the sounds of the place) first-hand, mostly through specially designed arts fellowships offered by various countries with bases in Antarctica. The establishment of such programs has not only led to an increase in the number of composers seeking to engage with the continent through their creative work, but it has also provided valuable opportunities for composers to mingle with scientists, to learn about the environmental issues affecting the far south (and the rest of the world as a result), and then to share their experiences and perceptions with a wider audience. Most composers who have visited the continent have made field recordings and then used sounds from these recordings within their Antarctica-related compositions – such as the works featured within this concert. Importantly, these works are not only examples of the natural world and science informing the arts, but also, in some cases, composers and sound recording technology are also assisting the sciences. For example, Douglas Quin’s recordings of Weddell seals in Antarctica are now contributing to scientific understanding of the seals’ breeding patterns (Terhune et al. 2008). While this is perhaps a rare case of the arts informing science, it nevertheless demonstrates that such arts-science collaborations are possible, in addition to the more common role that the arts plays in conveying messages from the sciences to the general public.

The idea for this concert emerged from a series of conversations between

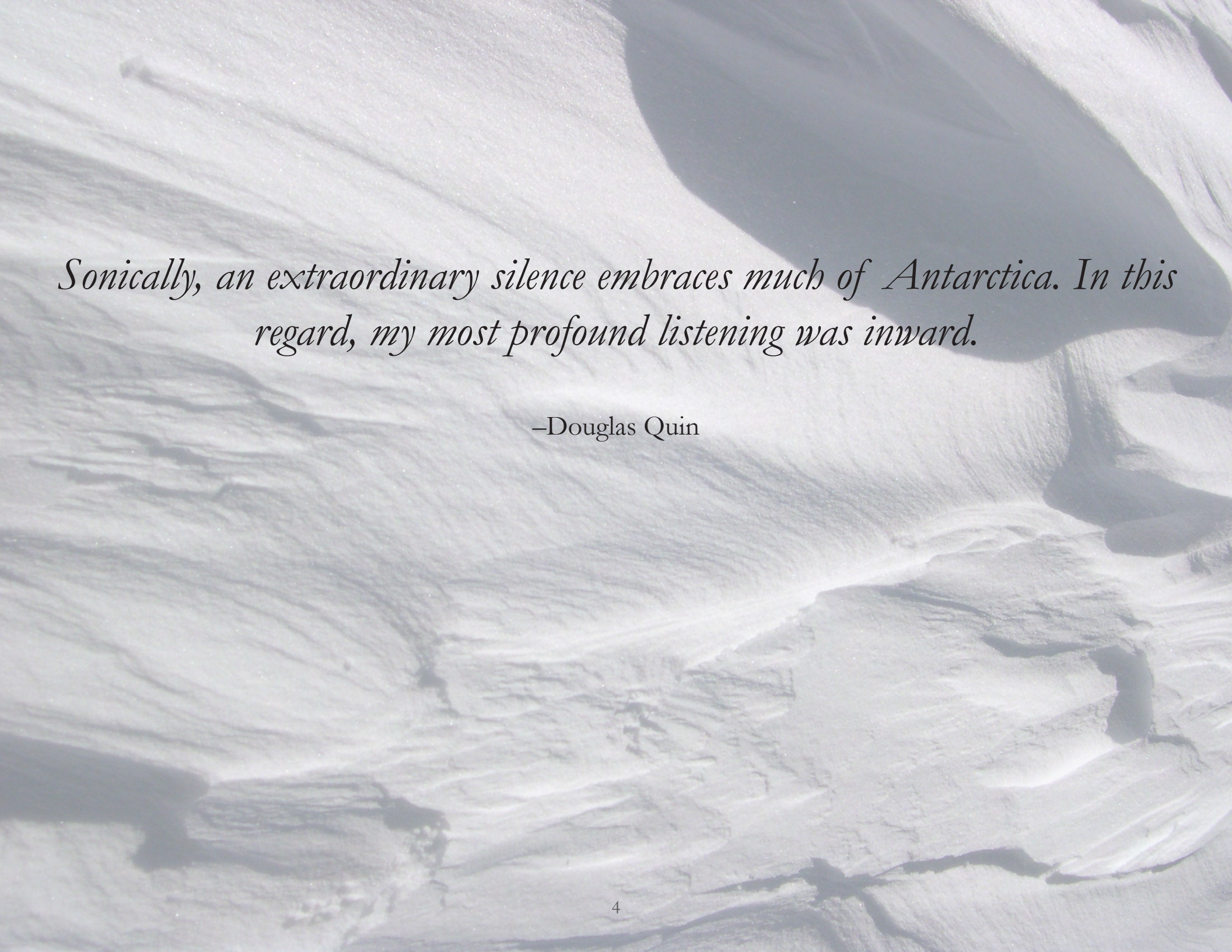


Douglas Quin and Jay Needham relating to their mutual interests in composition and Antarctica. According to Quin, the title, *Sonic Reckonings*, was chosen because all the composers whose works are represented within the concert “seem to be grappling with Antarctica across a range of modalities of thought and perception. The intersections of science and art that are common threads between us and the various ways in which we have engaged the senses seem to inform a collective reckoning of sorts” (Quin 2015b). Similarly, Needham (2015c) writes:

Reckoning seems a forgotten word, a belief that something is possible, that ideas and actions have summaries. The actions and intentions of the collected works therein serve as an anthology of both answers and questions in sonic form about Antarctica.

The concert will include live performances by Quin, Needham and Leonard of their works, as described in detail on the pages that follow, as well as the opportunity to hear recordings of the two soundscape works by Philip Samartzis and Lawrence English. Considered together, the compositions included in *Sonic Reckonings* not only establish a sense of place through their sonic properties, but also carry with them gestures of environmental advocacy. As the American composer John Luther Adams has asserted, such gestures in music are necessary not to “change the world,” but rather to change “the quality of our *attention* to the world” (Adams 2009: 103). By capturing the sounds of Antarctica and giving you the opportunity to *listen to their own listening*, the composers whose works are featured in this concert are not only sharing their experiences of the far south with you; they are also inviting you to give your *attention* to this place, and to broaden your understanding of Antarctica in the process.





Sonically, an extraordinary silence embraces much of Antarctica. In this regard, my most profound listening was inward.

—Douglas Quin



Resonant Evidence (2012-2015) – Jay Needham and Douglas Quin

Resonant Evidence is a collaborative composition by Jay Needham and Douglas Quin, who are both US-based composers, sound artists and academics. Needham and Quin have both visited Antarctica, albeit on separate occasions (Needham in 2009 and Quin in 1996, 1999 and 2000), and have accumulated large sound libraries of field recordings that they have since utilized in a wide range of creative works. For example, Needham produced the sound ‘sculptures’ *South Polar Suite* and *Reviving Spirits* for a collaborative exhibition and installation with photographer Gary Kolb titled *Antarctic Dreams* in 2010, while Quin’s three trips to the ice have led to the creation of his landmark soundscape recording *Antarctica* (Wild Sanctuary, 1998); the sound design for Werner Herzog’s Oscar-nominated documentary, *Encounters at the End of the World* (2008); and a multimedia composition based on the 1912-1913 diaries of Bert Lincoln (an Able Bodied seaman who participated in the Australasian Antarctic Expedition) titled *Aurora Passage* (2012). Needham and Quin had known about each other’s work for some years prior to the time when they actually met, which was in 2012 at an Antarctica-related conference. Soon after meeting, they made plans to create a work together that combined their shared interests in soundscape and Antarctica – and *Resonant Evidence* is the result. The work was premiered live by the composers

at the 4th Antarctic Art and Culture International Conference and Festival in Buenos Aires, Argentina, in 2012, and featured their collective polar field recordings of wind, weather and other mechanical sounds from the ice. Quin has written the following about the process behind the creation of *Resonant Evidence*:

The idea for the piece grew out of many conversations and ideas around the documentary role of our recordings, notions of sonic memory, and the particular aesthetic interests that we share—namely the perceived musical identities within the recordings . . . We rehearsed and intuitively settled on a loosely structured improvisation with the materials we had selected from the ice. Using a variety of signal processors, we were able to manipulate the field recordings live in performance. The result was a nice “conversation” between the two of us (Quin 2015).

While the version of *Resonant Evidence* that Needham and Quin performed in Buenos Aires focused primarily on Antarctica’s wind, the pair have decided to turn their attention towards “more of an ice palette” (Quin 2015) for this concert, in light of the theme of Balance/Unbalance. This is also particularly relevant and timely given that the ice has become the focus of much scientific research in Antarctica in recent years. For example, data derived from Antarctic ice cores are now revealing to scientists information about past temperatures and concentrations of gases (including carbon dioxide and methane) in the atmosphere and how these have changed during the last 800,000 years (Jouzel et al. 2007; Jouzel 2013; Lüthi et al. 2008; British Antarctic Survey 2010). Simultaneously, as Quin points out, “polar ice melt is presenting real, immediate and tangible change in a time scale we can grasp, i.e. decades, not millennia” (Quin 2015). In addition, scientists have recently started to take interest in and conduct research into the sounds of ice and what they can tell us about glaciers and the behavioural patterns of seals and other marine mammals that live on, and in the waters surrounding, the ice (Pettit et al. 2012; Pettit et al. 2015). Now that Quin is revisiting his recordings of the ice, he has started to reflect on the sounds he recorded several years ago in new ways, as he describes:

In revisiting my ice recordings . . . I have been drawn to a number of qualities in the sounds: from percussive booms from calving; to the thudding, cracking and knocking of ice refreezing and settling from a glacier; the grinding sounds of icebergs bumping up against one another; and the subtle pitched, patter

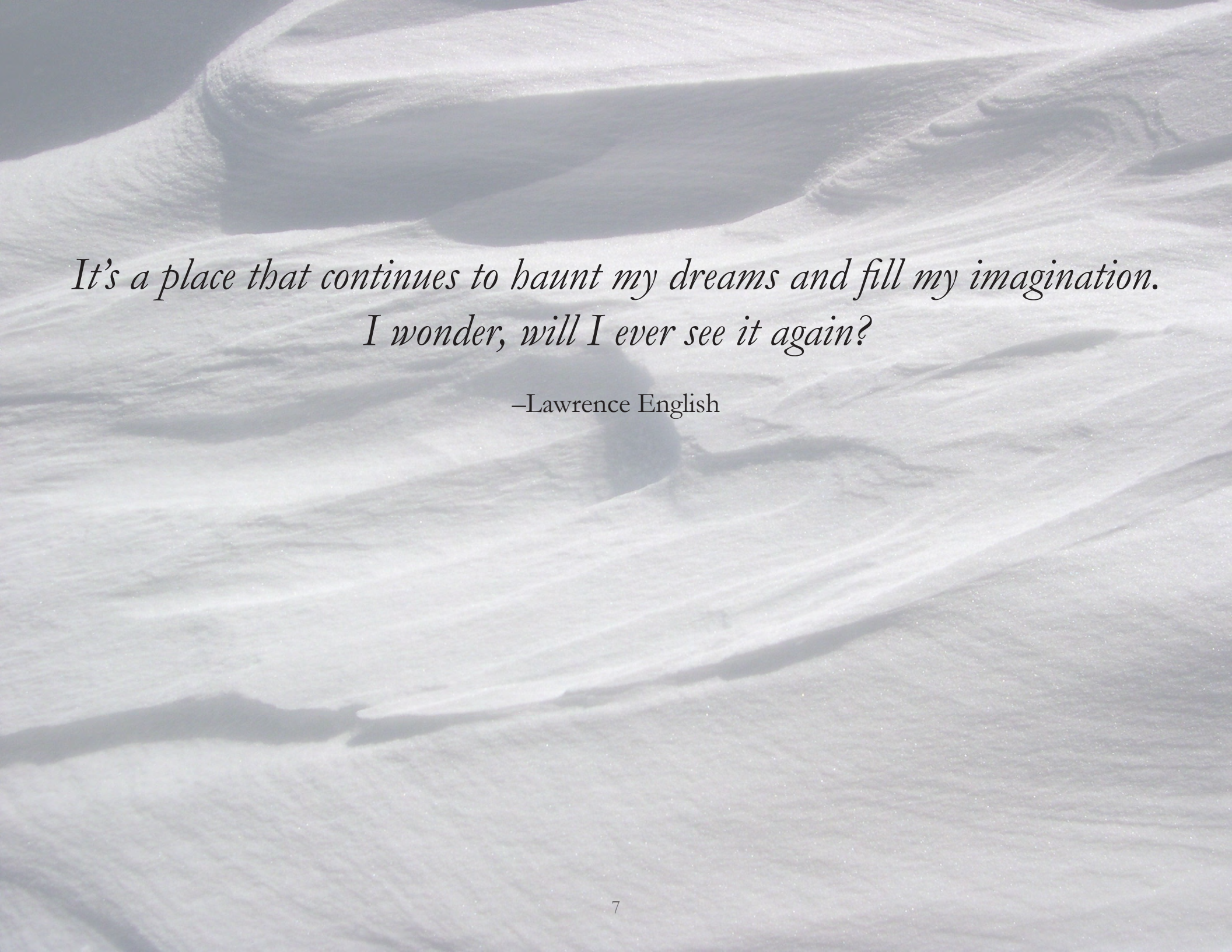


of melt and bubbles—both glacial and from brash ice. Part of the “resonance” I have been exploring in the melt recordings involves using filters that I set to feedback at frequencies within the samples and recordings. This kind of emphasis or accentuation reveals a remarkable range of microtonal harmonies (Quin 2015).

Both composers admit to being deeply inspired by science and aim through their independent and collaborative work to help to “bridge the gap” between the arts and the sciences. In a way, their field recordings function as data in themselves; they are sonic records that provide documentary evidence of the composers’ experiences on the ice and their perceptions as listeners that can be stored and then “analysed” at a later point in time. Both Needham and Quin seem to be aware of the cultural and archival value of the recordings they have made in the far south, which are now being used in compositions such as *Resonant Evidence*, as Needham writes:

I remember a specific phone call (one of many) where Doug and I were talking about the cultural value of archives and also talking about the science that is a part of what drives us. Besides the rich sonic world that sustains our curiosity, we also hit on the notion that these kinds of field recordings have a basis in a kind of proof. This led to us to consider the evidentiary nature of what we were up to and hence the eco-informed title. So, in essence, what had started as a richly descriptive conversation about the sounds we had recorded had morphed into the “duet” like structure, a continuing of that same conversation. The re-working of the *Resonant Evidence* thematic from wind to ice is a nice way to continue the blending or pairing of sound, especially when I consider it as a phase change or water cycle, resonant in tonality but also as a deep human/cultural resonance. I also really like time out of measure, freed from those temporal boundaries that are more about a system of notation. Ice time is a longer measure, compressed expressions from our current epoch (Needham 2015b).

In addition to its role as a sonic record or artifact, *Resonant Evidence* is also a highly effective and engaging work of art. It consists of a rich tapestry of aural impressions of the far south, captured by two of the most experienced practitioners in the field, and allows us to hear rhythms and harmonies of nature itself. As friends and colleagues with mutual interests in Antarctica and sonic art forms, Quin and Needham have shared many discussions about their work and experiences in Antarctica. *Resonant Evidence* is a continuation of that dialogue, expressed in a language that is, indeed, *universal*.



*It's a place that continues to haunt my dreams and fill my imagination.
I wonder, will I ever see it again?*

—Lawrence English

Lawrence English is a composer, media artist and curator based in Brisbane, Australia. His creative output includes works in a variety of media art forms and reflects his fascination with sound and space, the environment, memory, and the politics of perception. Field recording is an important component of English's creative work and his methodological approach and field recording techniques are informed by his theory of "relational listening" (English 2014a). This theory recognises the critical role of listening in the conception, creation and execution of audible artworks and seeks alignment between the listening of the human organic ear and that of the "prosthetic ear" of the microphone in order to create ideal conditions for successful transmission of the listener's listening (English 2014a; English 2014b; English 2015a).

In recent years, English has released a number of recordings that reveal a preoccupation with the sounds of winter weather, such as *For Varying Degrees of Winter* (Baskaru, 2007), *Shadow of the Monolith* (a collaboration with Austrian artist Werner Dafedecker, released by Holotype Editions in 2014) and *Viento* (Taiga, 2015). The title of the latter, *Viento*, is the Spanish word for "wind" and this album features two separate field recordings of wind in Patagonia and Antarctica, respectively. English made these recordings during his journey to and residency in Antarctica in early 2010 as part of the Antarctic Cultural Program run by Argentina's Dirección Nacional del Antártico.

Viento/ Antarctica comprises raw sound recordings made in the midst of blizzards at the two largest Argentine bases in Antarctica, Marambio and Esperanza. English has written the following about the process of making these recordings in Antarctica and then listening to the blizzards again

through the sonic snapshots captured in *Viento/ Antarctica*:

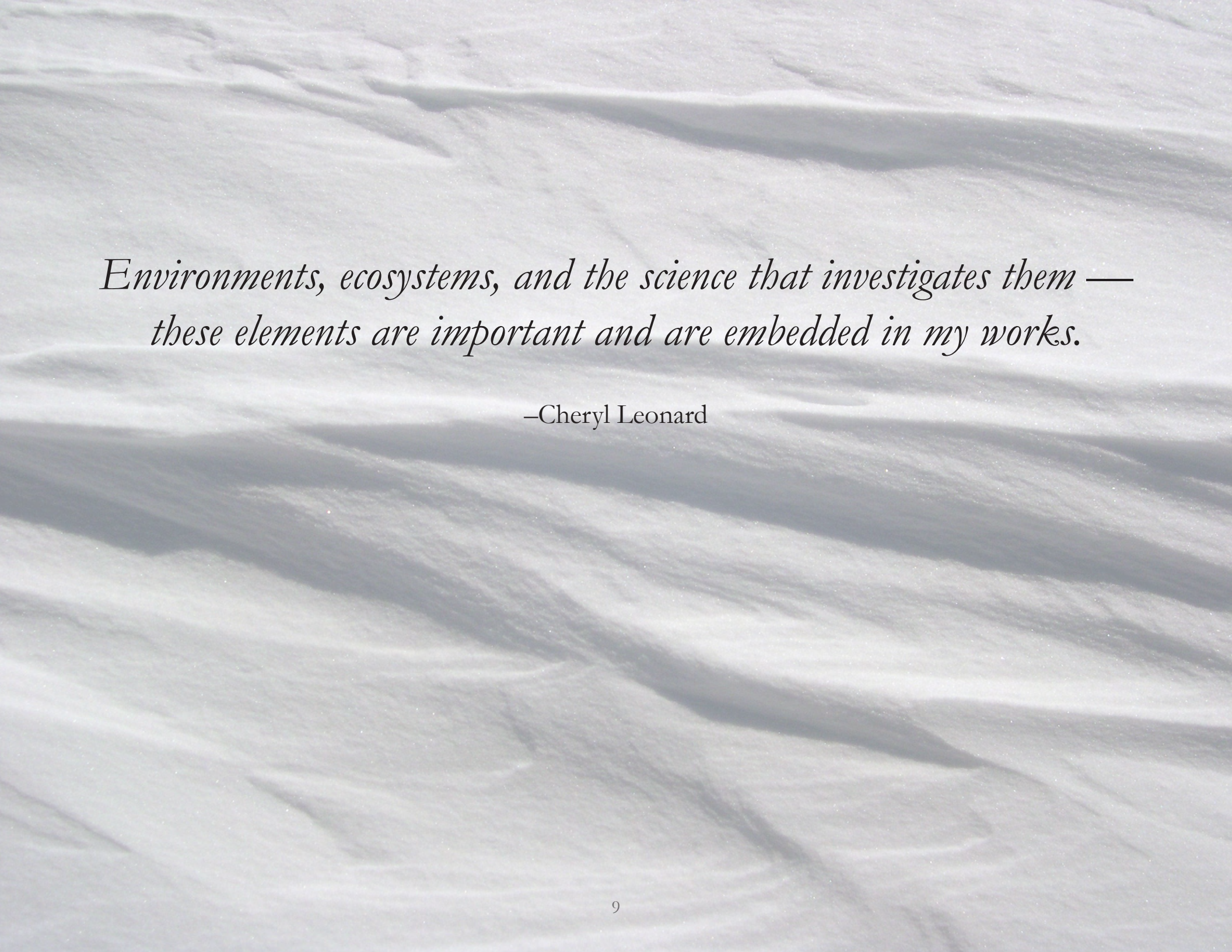
During the blizzard in Marambio, the temperature dropped to -40degrees centigrade (with wind chill) which made recording particularly challenging. The wind battered the base's structures and telecommunications equipment, making a range of unusual tonal phase drones, which you can hear in these recordings. The blizzard at Esperanza was mild by comparison, but still strong enough to coat penguins in a layer of snow as they huddled together during the worst of the wind storm. Listening back to these recordings I am struck

by the sheer physicality of the wind. It's rare that you feel physically reduced by the motion of air, but in . . . Antarctica that is just how I felt. A small speck of organic dust in a howling storm (2015b).



The way English felt about his encounters with the wind in the far south is perhaps not surprising given that Antarctica is widely recognised as the windiest continent on earth (Convey 2014: 1; Wayman 2013: 19; Dastidar and Persson 2005: 1552). In fact, the wind has been a common topic for discussion among those who have ventured to the region since the dawn of the Heroic Age of Antarctic exploration. It is even referred to in songs and verse penned by the men of the British and Australasian Antarctic Expeditions during the early twentieth century. Through the use of untreated sound recordings in *Viento/ Antarctica*, English allows listeners to engage with his

own subjective experience of wind in Antarctica. In other words, he invites you to listen to his own listening. While technically a raw field recording, the work is marked by great clarity and depth and is notable for its range of textures and timbres. It has previously been presented as a diffusion/ live performance and has recently been issued on LP through the American label, Taiga.



*Environments, ecosystems, and the science that investigates them —
these elements are important and are embedded in my works.*

—Cheryl Leonard

Cheryl Leonard is a San Francisco-based composer, performer and instrument maker who focuses on exploring sounds, structures and materials from the natural world in her work. During the 2008- 2009 austral summer, she travelled to Antarctica as part of the Antarctic Artists and Writers Program run by the United States' National Science Foundation to develop a series of compositions inspired by the unique environments and ecosystems of the Antarctic Peninsula. She spent five weeks at the US-operated Palmer Station, which is located on mountainous Anvers Island, the largest island in the Palmer Archipelago, situated off the north-west coast of the Antarctic Peninsula. During her residency at Palmer Station, Leonard made numerous field recordings, some of which are now available on the compact disc *Chattermarks* (Great Hoary Marmot Music, 2010). With the permission of the National Science Foundation, she also collected a small number of natural objects, including rocks, penguin bones and limpet shells, to take back to the United States for use in her compositions and live performances.

Once back in her studio in San Francisco, Leonard used the natural objects from Antarctica to create a set of musical instruments. She mounted several of the items on driftwood (see Figure 1) and then experimented with different ways of playing them, such as bowing, scraping and tapping the objects until she uncovered desirable and distinctive “voices and textures,” including sounds that for Leonard, “evoked elements of Antarctica” (forthcoming: 6). She then created a series of compositions under the collective title *Antarctica: Music From*

the Ice by combining sounds from her natural-object instruments with her Antarctic field recordings. Each of the ten pieces in this set has a unique theme which is based upon an aspect of the environment surrounding Palmer Station and connects to areas of scientific research under investigation in the region (Leonard, forthcoming: 1, 8). For instance, some of the pieces relate to changes in the climate and ecosystems of the Antarctic Peninsula and how these changes are affecting wind and storm patterns, the sea ice, glaciers and the local wildlife. Other pieces in the series focus on human exploration and exploitation and connections between Antarctica and global climate change.

White on White, which was composed in 2012 as part of *Antarctica: Music From the Ice*, is a reflection on the decline of Adélie penguin colonies in



Figure 1. Musical instruments Cheryl Leonard has made from natural objects collected in Antarctica, including the ‘Keel’ (front right), ‘Coracoids’ (middle, left) and ‘Skull’ (middle, right).



Fig. 2. Adélie penguins in the snow, Torgersen Island. Photograph by Cheryl Leonard; used with permission.

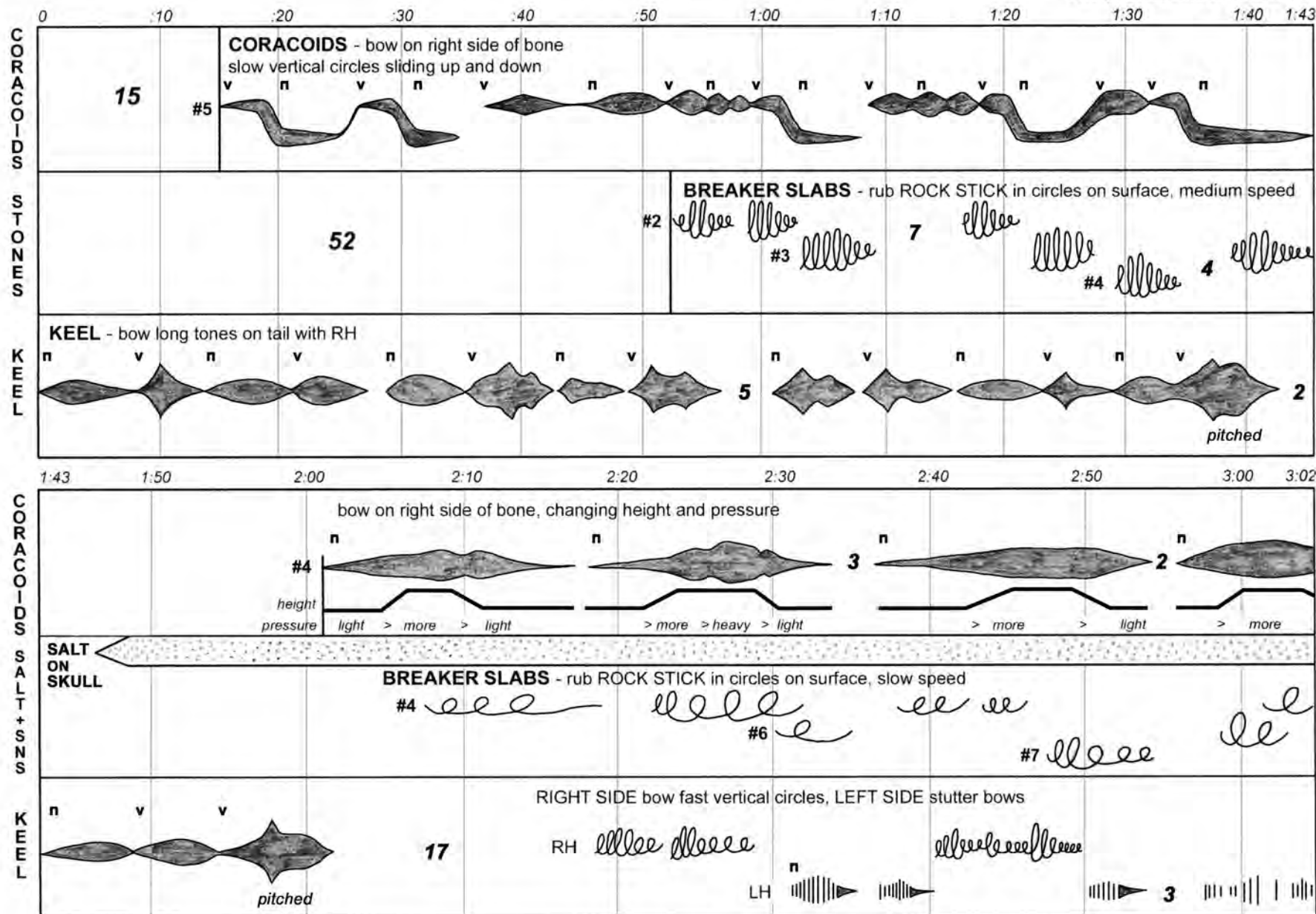
the Antarctica Peninsula region (see Fig. 2), a phenomenon that has attracted scientific research in the area in recent years (Clucas et al. 2014; British Antarctic Survey 2008). According to Leonard, the title, *White on White*, refers to “snow on penguin bones” (Leonard 2015). The piece is scored for specific types of penguin bones and rocks that she collected during her visit to Palmer Station. These include Adélie penguin coracoid bones (which are part of the bird’s shoulder girdle), a skull and a keel (sternum/breastbone), as well

as several small slabs of rock, each capable of producing a different pitch, that Leonard gathered from Breaker Island, off the south-west coast of Anvers Island. In *White on White*, the Breaker slabs are rubbed in circles at varying speeds and the coracoid and keel bones are bowed to produce “eerie, howling sounds” (Leonard 2010), while sea salt is dropped on the penguin skull to represent snow falling on penguin bones (see the first page of Leonard’s graphic score for *White on White* in Fig. 1). While the piece was originally designed so that all the sounds could be produced live by three performers, Leonard has also created a version for a solo performer on amplified Adélie penguin keel bone, accompanied by recordings of the other instrument parts (this is the version that will be heard today). Overall, the composition serves to illustrate how Leonard utilizes her natural-object instruments to create musical works that are not only highly original, but that are also representative of her experiences in, and perceptions of, Antarctica. Considered collectively, the pieces within *Antarctica: Music From the Ice* have the potential to convey to the listener an impression of the far south that can encourage the listener to feel a deeper sense of connection with and concern for Antarctica, as well as the environmental changes that are taking place in and around the continent. As Leonard (forthcoming: 9) writes:

My goal in creating these instruments, musical compositions, and performances is to share a little bit of Antarctica, especially with people who cannot visit the continent themselves. Environments, ecosystems, and the science that investigates them — these elements are important and are embedded in my works. In the end though, my principal hope is that this music helps people feel a meaningful connection to Antarctica, and conveys some of the awe and wonder I experienced during my adventures at Palmer Station.

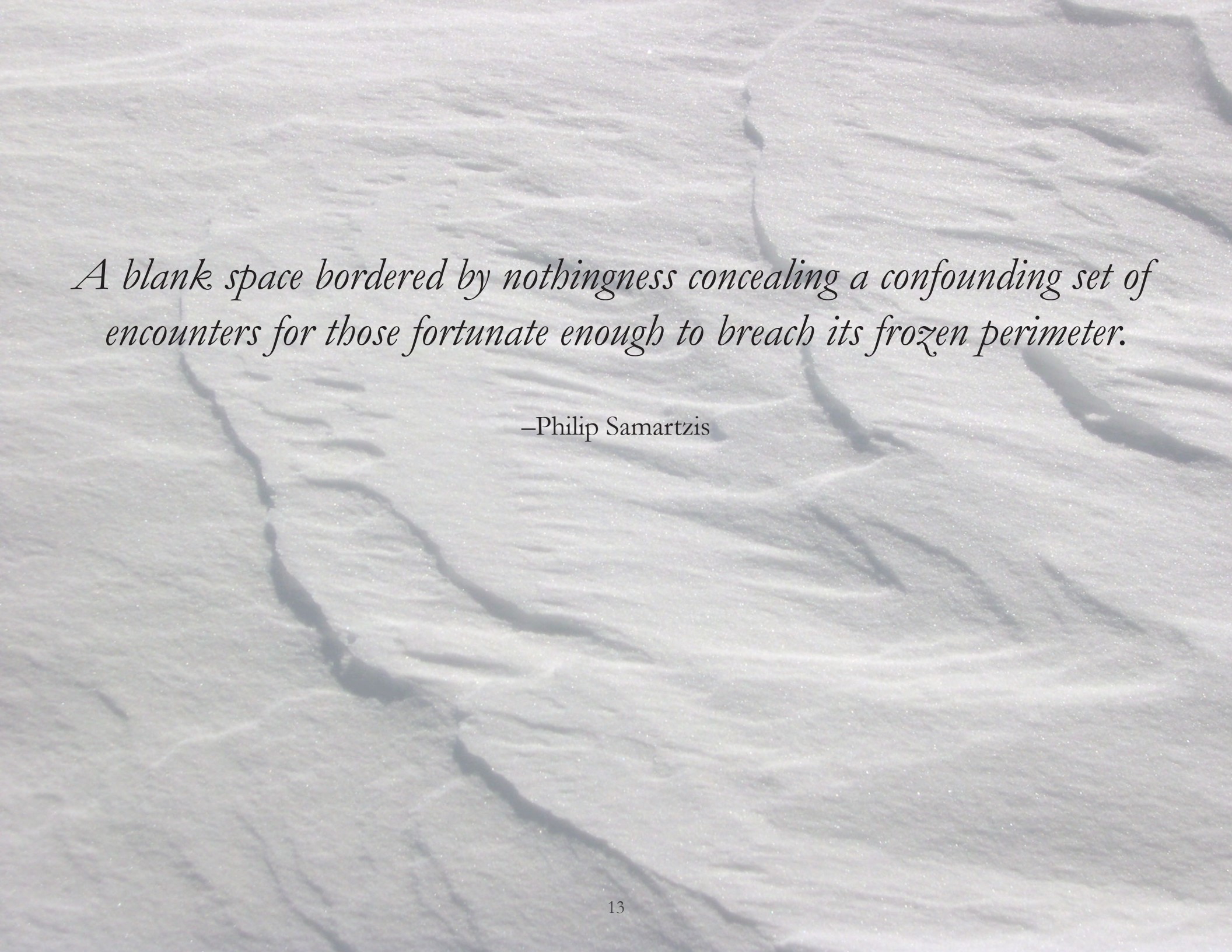
WHITE ON WHITE

Cheryl E. Leonard June 2012



1.

Fig. 3. The first page of the score for Cheryl Leonard's *White on White* (2012).



A blank space bordered by nothingness concealing a confounding set of encounters for those fortunate enough to breach its frozen perimeter.

—Philip Samartzis



Antarctica, An Absent Presence (2014) – Philip Samartzis

Philip Samartzis is a sound artist and curator, as well as Associate Professor in the School of Art at RMIT University in Melbourne, Australia, where he undertakes research in the areas of sound art, acoustic ecology and spatial sound practices. In 2009 he was awarded an Australian Antarctic Division Arts Fellowship to travel to Antarctica on board the icebreaker and research vessel *Aurora Australis* in order to make a series of sound recordings that documented his journey and the everyday experiences of those who travel to and spend extended periods of time in Antarctica. He spent six weeks at the busy Australian base, Davis Station, in East Antarctica, followed by a stopover at the subantarctic Macquarie Island on the way back home. The primary objective of his project was to “observe and document the effects of extreme climate and weather events upon various environments, communities and infrastructure” (Samartzis 2015). He recalls:

The principal idea was to chronicle the minutia of everyday life framed within the cold and isolation that delineates the Antarctic and Sub Antarctic regions. While I was curious about the daily operations that occur on ship and station, I was specifically interested in the systems and technologies required to

sustain life, and the ways in which order and social cohesion are accomplished. By experiencing life in Antarctica I hoped to articulate a point of difference whereby the continent is understood purely through its impact on people and infrastructure (Samartzis 2015).

The recordings that Samartzis created as part of his Antarctic journey have been used to develop a series of audio pieces for galleries, performances and festivals. These pieces include *At the End of Night* (2012), *Aurora Australis* (2012), *Crush Grind* (2013), *Macquarie Island* (2013), *Icebreaker* (2015), *Davis Station* (2015) and the work on today’s program, *Antarctica, An Absent Presence* (2014). *Antarctica, An Absent Presence* was commissioned in 2014 by France Culture, the INA-GRM in Paris and the Audio Arts Unit of the Australian Broadcasting Corporation’s Radio National in Melbourne. The piece also received funding from the Australia Council for the Arts. The composer writes about the work:

Antarctica, An Absent Presence provides a compendium of observations using sound recordings and text formatted as a journal to convey an experience of Antarctica different to those presented through the lens of natural history, climate science or human exploration. It is a reimagining of a place marked by a strong sense of absence, empty and white, deserted and silent. The journal acts as repository for displaced memories – real and imagined – chronicling the people, places and conditions I encountered, supplemented by descriptions of technical and artistic process. The format is designed to acknowledge the revered, almost religious place of the journal in Antarctic exploration. It is central to the promulgation of the mythology shrouding Antarctica founded on the much-vaunted heroic age in which qualities of endurance, sacrifice and hardship are heralded. Alternative perspectives however abound in the journals of support crew. In them are fascinating descriptions of the numbing banality of life predicated on strict routine and hierarchy, which provide insight into the complex social structures informing Antarctic occupation. Antarctica provides a rare opportunity to articulate an experience of a region unavailable to all but a handful of people authorised to safeguard its interests. A blank space bordered by nothingness concealing a confounding set of encounters for those fortunate enough to breach its frozen perimeter (Samartzis 2015).

Created for the French radio programme Atelier de Création Radiophonique, the full version of *Antarctica, An Absent Presence* is in the French language and is almost one hour in duration. The excerpt to be heard in this concert is much shorter, drawing on French translations of the following two entries from Samartzis's Antarctic journal:

January 27

We depart Hobart on the brightly coloured Aurora Australis.

The aim of the voyage is to resupply Davis and Mawson stations located on the Eastern side of Antarctica some 5000 kilometres away.

Within hours we are confronted by a severe low-pressure system.

Through glass stained yellow I gape at the towering waves that submerge the ship in greyish water, causing it to pitch and roll helplessly. The assorted creaks, jolts and clangs generated by the bracing conditions suppressing all but the omnipresent thrum of the ship's two medium-speed diesel engines.

Faintly permeating the air is the foul smell of diesel, cooking grease, corrosion and sea spray.

Eerily resounding through empty stairwells and corridors is the disconsolate groan of the vessel's stabilisers struggling to correct our unstable trajectory.

February 5

Nearing the frozen continent the Aurora Australis encounters iceberg alley comprising tremendous forms of white and blue ice of various shapes and sizes.

A strange calmness descends as the ship traverses the glistening maze.

After drifting dreamily for several hours the continent finally comes into view.

Assembled across the bleak topography bordering Broad Peninsula and

Heidemann Bay are the odd assortment of buildings and structures of Davis Station.

After peering at the alien landscape for some time I notice a long band of white stretching across the horizon.

At first I presume it is a cloud formation until I finally realise I am staring at the Antarctic Plateau rising ever so gently into the sky.

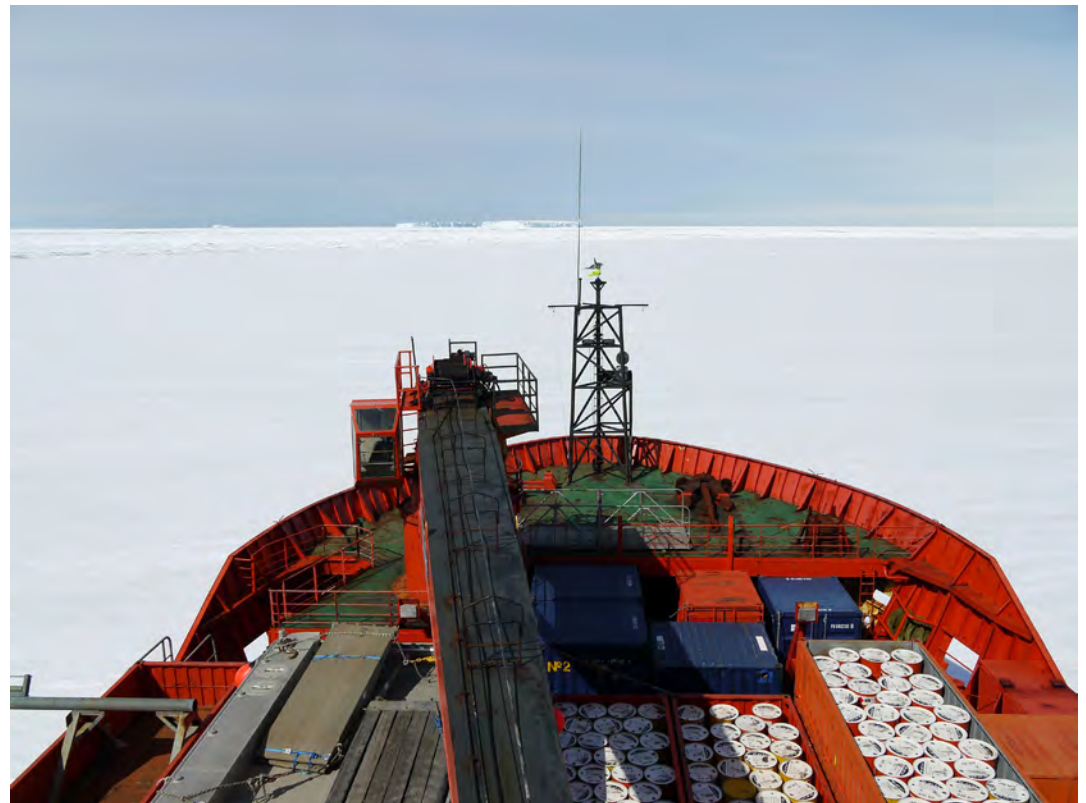
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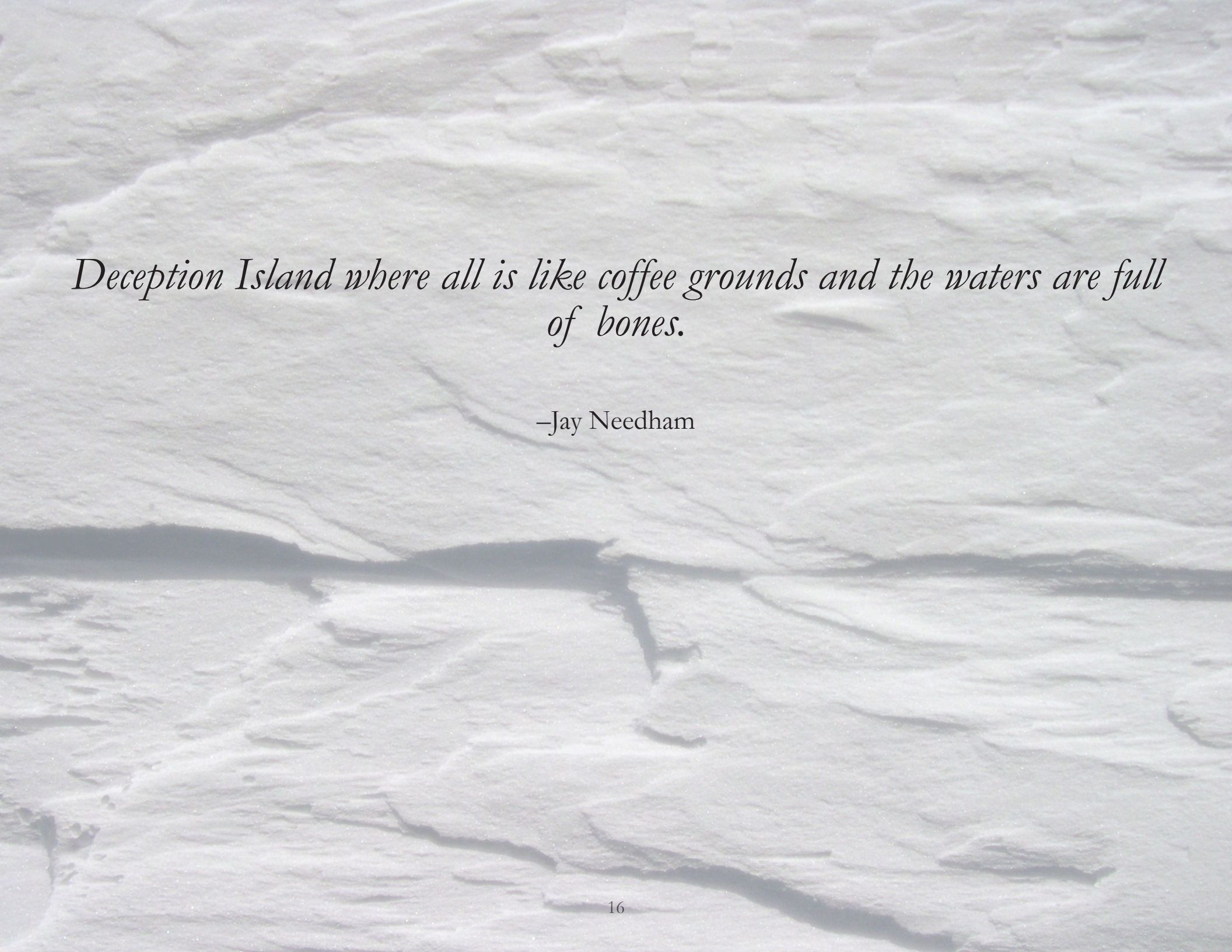
Voice: Julie Pouillon

Translation: Stephanie Lavet

Engineer: Bruno Murlan

Producer: Lionel Quantin





*Deception Island where all is like coffee grounds and the waters are full
of bones.*

—Jay Needham

Chronography: animal (2012) – composed by Jay Needham and performed by Jay Needham, Cheryl Leonard and Douglas Quin

Chronography: animal is an electro-acoustic composition that combines field recordings made by Jay Needham in Antarctica in 2009 with live sounds created from repurposed antique gramophone horns and mechanical clockwork. The piece was created in 2012 – the same year that marked the centenary of the death of Robert Falcon Scott and his polar party during the British Antarctic Expedition 1910-13 (Terra Nova) – and was directly inspired by a photograph dating from the Terra Nova expedition. The photograph, which was taken by Herbert Ponting, captures one of the expedition's dogs, known as "Chris," standing on the ice next to a gramophone and peering into the instrument's horn, as if listening intently. Scott and his companions had taken two gramophones and hundreds of 10-inch 78 rpm records on board the Terra Nova with them in 1910, and these items proved to be invaluable to the expedition in terms of providing much-needed relief from the monotony of long voyages and freezing cold, dark months of winter inside the huts in Antarctica (Locantro 2012: 2, 9-11). These instruments also served as time keepers during the early expeditions and were frequently used as alarm clocks to wake the men so that they could undertake important regular duties, such as conducting scientific and meteorological observations (Campbell 1988: 69; Philpott 2013: 462). An additional function that the gramophone served during the Heroic Age of Antarctic exploration was as a mechanism through which the men could interact with the local wildlife, as many surviving photographs of gramophones surrounded by penguins on the ice attest (Laserson 1999: 260-61; Shack-

leton 1999). It is very fitting, therefore, that Needham drew inspiration from the themes of time, sound, technology and interaction with animals that are presented in the Ponting image for his composition of the work *Chronography: animal*. The composer writes:

The image offers a curious set of entry points for analysis and creative reflection. Performed as a bit of comic relief on the ice and as a homage to/riff on His Master's Voice, Ponting's picture reveals a number of relationships, extending the role this image has as an historic exploration artifact. The image portrays several intervals of time simultaneously. One such interval is the initial exposure on film, perhaps a fraction of a second. Another interval represented is the domain of musical time occurring on the platter and in the air. An additional interval is the perceived time that we accord the dog in the image. The latter illustrates the continued desire we as humans have to communicate with other animals, in this case using the Victor Talking Machine in an effort to establish a communicative link. The image is a telling expression of how music helped to maintain a specific kind of mission time. In this way, the gramophone was a cultural sextant for those who explored and those who wandered off-leash.

The traveling of these sound machines into the wilds was possible because of the continued innovation of mechanical clock technologies. A gramophone is a tension instrument not unlike the chronometer. Each instrument stores and releases tension, but each is designed to unwind and perform time for a different perceptive outcome. The layers of accumulated time in the Ponting image influenced my concepts around the framing and performing of *Chronography: animal*. The piece is a live electroacoustic work that unwinds layers of time; it is conceived as a bridge to connect practices of improvised music and sound art as an evocation of place. In this piece, we hear sounds from



Antarctica accompanied by the sounds of manufactured objects that were used in the exploration of that continent (Needham 2013: 37).

For this performance of *Chronography: animal*, Needham has repurposed three antique gramophone horns that will be played as amplified instruments in a variety of ways – such as by being bowed, tapped and scraped – in order to achieve an array of different percussive and timbral effects that are “strangely similar to some of the sounds one hears down there” (Needham and Leonardson 2015a). For example, some of the sonic effects that can be produced with the amplified gramophone horns closely resemble the sounds of rain, wind, and even animal vocalizations. Similarly, in selecting the field recordings for use in the composition, Needham has been “drawn to those that had a certain richness, evoking a sense of scale and immersion that audibly described Antarctica” (2013: 37). In order to further suggest a sense of time and place in the work, the composer incorporates live sounds from an antique clock mechanism, with the “familiar interval of the clock tick . . . used as a kind of rhythmic antonym to the field recordings” (Needham and Leonardson 2015a). *Chronography: animal* also features excerpts from songs that are known to have been taken on Scott’s voyage, such as *Love is Meant to Make us Glad*, performed by Margaret Cooper, *Wait*

Till the Work Comes Around by Gus Elen and *Night Hymn at Sea* by Clara Butt. These songs are played back live on stage from 78 records, creating yet another point of connection with the Ponting image and the sound (and sound quality) of the music that might have been heard by the dog on the ice at that time that the photograph was taken.

While Ponting’s image can suggest sound, it is, nevertheless, a *silent* artifact. Needham’s composition, on the other hand, provides an audible exploration of (or soundtrack to) the Ponting photograph that locates the image of the dog and the gramophone *sonically*, in time and place. Through its incorporation of Antarctic soundscape recordings, historical recordings of songs played on 78 records and sounds created with mechanical clockwork and antique gramophone horns, *Chronography: animal* gives the listener a sense of what Chris the dog might have actually heard during that moment on the ice. It also highlights for the listener the important roles that sound, technology and communication (both human to animal and human to human) have played in Antarctic exploration across time, as well as the ongoing function that they continue to serve today in assisting with scientific investigations in the region and making important information about climate and environmental changes available to people around the globe.





Lawrence English is a composer, media artist and curator based in Australia. Working across an array of aesthetic investigations, English's work explores the politics of perception and prompts questions of field, perception and memory. English utilises a variety of approaches including visceral live performance and installation to create works that ask audiences to consider the relationship to space, place and experiential embodiment.

Published widely on respected imprints including Important Records, Touch, 12K, Taiga, and Winds Measure, English's work is sculpted, colliding overwhelmingly intricacy with roaring waves of low vibration. His latest solo album *Wilderness Of Mirrors* revels in 'extreme dynamics and densities' and resolves into an 'overriding aesthetic of harmonic distortion'. He is one half of Slow Walkers with musician Liz Harris and enjoys ongoing collaborations with John Chantler (as Holy Family), Jamie Stewart, Stephen Vitiello, Werner Däfeldecker, David Toop, Akio Suzuki and others.

Outside of his recording and art commissions, Lawrence English curates a number of ongoing sound and media programs including Mono at the Institute Of Modern Art. He produces Room40's Open Frame Festival.

English's imprint and multi-arts organisation Room40, dubbed by Pitchfork as "the foremost purveyor of experimental music in the southern hemisphere", maintains a eclectic release of Australian and international artists.

Cheryl E. Leonard is a composer, performer, and instrument builder. Over the last decade she has focused on investigating sounds, structures, and objects from the natural world. Her recent works cultivate stones, wood, water, ice, sand, shells, feathers, and bones as musical instruments. Leonard is fascinated by the subtle intricacies of sounds. She uses microphones to explore micro-aural worlds hidden within her sound sources and develops compositions that highlight the unique voices they contain. Her projects often feature one-of-a-kind sculptural instruments that are played live onstage and field recordings from remote locales.

Leonard holds a BA from Hampshire College and an MA from Mills College. Her music has been performed worldwide and she has been commissioned to create instruments and music for Kronos Quartet, Illuminated Corridor, and Michael Straus. She has received grants from the National Science Foundation's Antarctic Artists and Writers Program, ASCAP, American Composers Forum, American Music Center, Meet the Composer, and the Eric Stokes Fund. Leonard has been awarded residencies at Oberpfälzer Künstlerhaus, Djerassi, the Arctic Circle, Villa Montalvo, and Engine 27. Recordings of her music are available from NEXMAP, Unusual Animals, Ubuibi, Pax, Apraxia, 23 Five, and Great Hoary Marmot Music.

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Jay Needham is a sound artist, electro-acoustic composer, teacher and scholar. He utilizes multiple creative platforms and his works often have a focus on recorded sound, archives and the interpretation of artifacts. His sound art, works for radio and visual art have appeared at museums, festivals and on the airwaves worldwide. Through applied aspects of his research, Needham strives to affect positive change and bridge the gap between the arts and the sciences.

His most recent sound installation is on permanent display in the BioMuseo, designed by Frank Gehry in Panama. He has been invited to speak and present his work at many noted programs including the Amsterdam School for Cultural Analysis, the Department of Techno-Cultural Studies, University of California, Davis, California Institute of the Arts and the School of the Art Institute, Chicago. His research is published in the journals, *Exposure*, *Soundscape: The Journal of Acoustic Ecology*, *Leonardo Music Journal*, and in the book *Hearing Places: Sound, Place, Time, Culture*.

Needham is the Interim Director of the Global Media Research Center at Southern Illinois University at Carbondale and is a member of the board of the World Forum of Acoustic Ecology. He received his MFA from The School of Art at California Institute of the Arts in 1989.



Douglas Quin is a sound artist, naturalist and educator. His work has been performed at festivals and venues internationally including Merkin Hall, The Kitchen, the Kennedy Center for the Performing Arts, and Spoleto Festival USA. Recent music commissions include *Polar Suite* for Kronos Quartet featuring soundscapes and interactive electronics. He has worked variously in sound design for feature and documentary films, games, and exhibits for the Smithsonian Institution National Museum of Natural History and the American Museum of Natural History, among others. Quin has published articles and research in various journals including *Polar Biology*, *Musicworks*, and *Soundscape: The Journal of Acoustic Ecology*. He is currently involved as a bioacoustics researcher in community-based conservation efforts to protect the critically endangered kagu bird in New Caledonia.

He is the recipient of numerous awards and grants including the Ars Acustica International prize, Meet the Composer, multiple fellowships in music composition from the National Endowment for the Arts and support from the National Science Foundation, World Wildlife Fund and Conservation International.

Quin received a BA from Oberlin College, an MFA from the School of the Boston Museum of Fine Arts and Tufts University, and PhD from the Union Institute. He teaches at the Newhouse School at Syracuse University where he co-directs the Audio Arts Graduate Program.



Philip Samartzis is an academic, sound artist and curator who has performed and exhibited widely including presentations at The Australian Centre for Contemporary Art, The Cartier Foundation for Contemporary Art, The Andy Warhol Museum, The San Francisco Museum of Art, The Mori Arts Centre, The National Taiwan Museum of Fine Arts, The National Center for Contemporary Art - Moscow, The South African National Museum, The National Gallery of South Australia, and The National Gallery of Victoria.

In 2009 he was awarded an Australia Antarctic Division Arts Fellowship, and an Australia Council for the Arts Project Fellowship to undertake sound recordings in Antarctica.

Philip is an Associate Professor in the School of Art at RMIT University where he researches in the areas of sound art, acoustic ecology and spatial sound practices. He is also the artistic director of the Bogong Centre for Sound Culture, which he co-founded to interrogate the history and ecology of the Australian Alps.

Dr. Carolyn Philpott is a lecturer in musicology at the University of Tasmania's Conservatorium of Music in Hobart, Australia. Her research interests include intersections between music, place and the environment, especially music composed in connection with Australian landscapes and musical responses to the world's southernmost continent, Antarctica. She has published numerous peer-reviewed articles in both musicology and polar studies journals, as well a book chapter in *Musical Islands: Exploring Connections Between Music, Place and Research* (Cambridge Scholars Publishing, 2009). She has also contributed to articles published in the internationally renowned music encyclopaedias *New Grove Online* (*Oxford Music Online*) and *Die Musik in Geschichte und Gegenwart*.

In addition to her role at the Conservatorium, she regularly contributes to the Bachelor of Antarctic Studies program offered through the University of Tasmania's Institute for Marine and Antarctic Studies (IMAS). She is also the current Secretary of the Tasmanian Chapter of the Musicological Society of Australia, gives pre-concert talks for the Tasmanian Symphony Orchestra and is a music critic for the *Mercury* newspaper (Hobart).



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