t first glance,¹ the pastoral poems² of Theocritus from the first half of the third century B.C. or of his imitator Virgil³ seem like a quantum leap away from a sound recording in a polar cap. One occurred more than 2000 years ago somewhere in an imagined southern prosperous landscape, while the other was captured in ice and snow beyond 66° latitude North or South. Focusing on these two historically distant genres, I observed the impact of desire and longing in both, while noticing that the two genres are far beyond idealization and instead appear to be connected in their cultural impact and significance for acoustic depiction as an artistic means. As I argue here, both Greek Arcadian literature and modern soundscapes recorded in Arctic or Antarctic landscapes create an atmosphere of “close listening” to nature⁴ and reveal the societies’ actual grievances to listeners. Artistic

¹ I would like to thank Annette Kreutziger-Herr and Britta Sweers for initiating two conferences on ecomusicological issues in 2011 where I had the chance to present my ideas. I am grateful to Britta Sweers for her constant feedback and for persevering to publish the proceedings and this article herein. Ecomusicological research and my thinking have evolved since writing the text, but I am convinced that the points I raise in the following still remain important.

² A word on nomenclature: The labels bucolic, pastoral, and idyllic are partially used almost synonymously, although this terminology does not define them clearly. The discussion whether Virgil wrote pastorals is given in an account by Martindale, who comes to the pragmatic end that they are received as pastorals now (Charles Martindale, “Green Politics: The Eclogues,” in The Cambridge Companion to Virgil, ed. Charles Martindale (Cambridge: Cambridge University Press, 1997), 107–124, here 107, 109, italics by the author). See also: Hans-Peter Ecker, “Idylle,” in Historisches Wörterbuch der Rhetorik vol. 4, ed. Gert Uedig (Tübingen: Niemeyer, 1998), column 183–202, here col. 183. Paul J. Alpers avoids to name these poems “genre” but prefers the term “mode” and defines ten of the collection of thirty poems of Theocritus as “pastorals;” this mode is to be named correctly “bucolics” (herdmen’s songs), but the labeling “eclogues” is correct as well and more common (Paul J. Alpers, The Singer of the Eclogues: A Study of Virgilian Pastoral (Berkeley: University of California Press, 1979), here 2).

³ Theocritus of Syracuse wrote the idylls in the mid–third century B.C., and the Roman poet Virgil wrote the Eclogues between 42 and 38 B.C.

⁴ For a definition of the difficult term “nature,” I go with Denise von Glahn’s adaption of the Perry Miller statement, saying that the meaning of nature is simply that its meaning cannot be fixed (Denise von Glahn, Music
negotiations of social topics such as urbanization, deforestation, and forced relocation in ancient times along with the effects of global warming in the twenty-first century align with the claims by ecocritic Terry Gifford: “It is because the environmental crisis is also a cultural crisis that we need to re-examine what insights pastoral can offer us in its mode of dialogue across our conventional separations of categories of knowledge and their discourses.”

My intention here is to examine the ecocritical impact of soundscapes. As musicologist Aaron S. Allen puts it, ecocriticism is the study of cultural texts with regard to the human-environmental relationship. Meanwhile, its equivalent, ecomusicology, “considers musical and sonic issues, both textual and performative, related to ecology and the natural environment.” With this in mind, I will analyze some characteristic elements—content, composition, and historical background—of early pastoral poems by Theocritus and Virgil that aim beyond escapist traits and will touch on their transformed adaptations in early modern Italy. This will be exemplified by three different soundscapes from the Arctic

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Losleben – Arctic Arcadia


5 Gifford, Post-Pastoral as a Tool for Ecocriticism, 16.


7 For a discussion on the escapist impact of pastoral and its reception, see Epstein, “Darius Milhaud’s Machines Agricoles.”
and Antarctic landscapes. Crucial here is that both text forms evoke an ideal sense of place, which is in dichotomic opposition to readers’ or listeners’ real sense of place and time. Today, one landscape that has gained significant attention and might, as I argue, represent such an opposition are the Arctic and Antarctic landscapes. While only a few people know the Arctic or Antarctica first hand, a vast amount of photographs captured by explorers, photographers, and researchers and distributed via slide shows, books, and documentaries visually convey the specifics of these polar landscapes. Although fundamentally different in their geologies, the common characteristics of these landscapes can in large part be summed up through the notion of “absence”—of cars, of cities, of streets, of people, of trees, and of a wide range of colors. Indeed, the photographs display all possible shades of white, yet which have become—due to milder and shorter winters caused by global warming—a past memory. Moreover, and differing to the imagery depicted, audiences revive each place by thick acoustic descriptions in both genres, for which the language of Canadian composer, musicologist, and researcher Raymond Murray Schafer (b. 1933), who contributed to the establishment of so-called Acoustic Ecology, is fundamental. However, together with many other scholars I do not share Schafer’s degrading of human urbanism, which he contrasts to “natural sound environments,” or his essentialist thoughts on the “idea of the North” as the core of a nation (in this case, the Canadian), nor his racist and sexist belief in the supremacy of Northern (white, male) culture. Rather, it is his theoretical foundation that provided the foundation for the growing awareness of environmental acoustics and the increasingly popular research field of sound studies.

10 Although the geographical, geological, and social differences between the Arctic and Antarctica are crucial, I have decided to include also artistic works that emanate from the Antarctica. The Arctic is a sea, adjacent to Northern America, Europe, and Asia, covered by ice which diminishes continually due to global heating and being increasingly free of ice during the summers. About one million people live here. The Antarctica is a continent and does not supply living conditions for humans. However, both pole regions are exponentially more imperiled by the effects of the rise in greenhouse gas levels and ozone depletion and reveal significant losses of ice mass. With ice shields, glaciers, and snow, they not only share a dominant and for the layperson characteristic matter, but are also marked by vulnerability in the context of global heating.


Acoustic Ecology and Soundscapes

Schafer’s political imagination of northern regions, or “Northernness,” in combination with his idealization of “the silence of winter” is reflected in works like North/White (1979) and in his writings, e.g. Music in the Cold and The Soundscape: Our Sonic Environment and the Tuning of the World. The latter’s part entitled “First Soundscapes” diachronically presents literal depictions of natural sounds like water in their different conditions of aggregation, including snow, ice, pack-ice, and permafrost. This use of actual sound descriptions led me to consider the connections between modern soundscapes and ancient poetry. Yet while Schafer uses the ancient Greek poetry of Theocritan (b. 270 B.C.) and Roman poetry of Virgilian (70 B.C. – 19 B.C.) to illustrate technical terms like the so called hi-fi soundscape, I will further illustrate the complexity of this ancient mode and highlight a deeper connection between the two art forms—modern soundscapes and ancient poetry. In both art forms, sounds are a specific means to express criticisms of the circumstances they emerge from. Via their acoustic-artistic depiction of the North, both art forms encourage readers or listeners to become consciously aware of their specific settings and place themselves in relation to them, while also offering a powerful expression of artists’ critique of the First World’s ignorance toward climate policy change, even while only a relatively small number of inhabitants of the sparsely populated geographical North is in danger to lose their land.

Documenting these “soundscapes”—a term Schafer coined after “landscape”—was at the forefront of developments in the 1970s. With rising awareness of noise pollution in Vancouver, Schafer and his colleagues Barry Truax (b. 1947), Hildegard Westerkamp (b. 1946), Peter Huse (b. 1938), Bruce Davis (b. 1946), and Howard Broomfield (1947 – 86) embarked on an acoustic study of Vancouver, recording environmental sounds that occurred in and characterized the city, measuring sound and noise levels, creating soundmaps, and conducting interviews with inhabitants. This led to the release of a compilation of nine tracks on an LP entitled The Vancouver Soundscapes (1973), as well as Schafer’s


16 Schafer, The Soundscape.
17 Schafer, The Soundscape, here 20–21.
18 Schafer, The Soundscape, 43.
19 Timothy Snyder, Black Earth. The Holocaust as History and Warning (London: Vintage Books, 2015), 320. Snyder draws an analogy between the fascist line of argumentation of the 1930s and 1940s to the First Worlds behavior nowadays.
“introduction to the science and art of composing the soundscape.””\(^{20}\) Subsequently, the group widened its analytical focus on acoustics to a national level,\(^{21}\) and later turned to Europe to document the soundscapes of five European villages.\(^{22}\) This broad spectrum of acoustic investigation of cities and villages over a long time period illustrates Schafer’s critical focus on an ever growing urban noise pollution, caused by what he calls lo-fi sounds, or “broad-band noise,” where “individual acoustic signals are obscured in an over-dense population of sounds, and which has the consequence that “[p]erspective is lost.”\(^{23}\)

The contrast between lo-fi sounds and lo-fi soundscapes becomes clear in Schafer’s examples: the “footstep in the snow, a church bell across the valley or an animal scurrying in the brush” are only perceivable as part of a hi-fi system, as the “hi-fi soundscape is one in which discrete sounds can be heard clearly because of the low ambient noise level.”\(^{24}\) Arctic and Antarctic landscapes with their loose populations, small cities, and domination of sound-absorbing snow provide the perfect environment for a hi-fi soundscape. And Schafer explains further: “The country is generally more hi-fi than the city; night more than day; ancient times more than modern. In the hi-fi soundscape, sounds overlap less frequently; there is perspective—foreground and background.”\(^{25}\) To make his point clear, Schafer plunges into literature going back to the Latin poetry of Virgil, which clearly distinguishes the different sounds:

Hyblaean bees coax you with a gentle humming through the gates of sleep . . . you will have the vine-dresser singing to the breezes, while all the time your dear full-throated pigeons will be heard, and the turtle-dove high in the elm will never bring her cooing to an end.\(^{26}\)

It is due the landscape’s “stillness” that the “delicate music” of the shepherds’ pipes can be created, and transform this solo woodwind into the symphonic epitome of the pastoral.\(^{27}\) In choosing Latin poetry by Virgil, Schafer clearly emphasizes his acoustic and social ideals. Yet Arcadian poetry is more complex than Schafer’s short citation suggests; it conveys sociopolitical impact and connections to readers’ lives,

\(^{23}\) Schafer, *The Soundscape*, 43.
\(^{24}\) Schafer, *The Soundscape*, 43.
\(^{25}\) Schafer, *The Soundscape*, 43.
\(^{26}\) Schafer, *The Soundscape*, 44.
\(^{27}\) Schafer, *The Soundscape*, 44.
and uses acoustic means on different levels to convey its message. Therefore, I will first explain the dissemination of Arcadian literature, secondly introduce its content, and thirdly show the use of musical means to convey the message, leading to conclusions of the way that Arcadian ideas are reflected in modern soundscape artworks, all of which will be informed by Raymond Murray Schafer’s important contributions to this field.

Sounds of Arcadia

The life and work of shepherds was part of ancient reality, so it is not surprising that they appear in early European and non-European texts, such as the old-Babylonian Gilgamesh Epos or the Greek Homerian Odyssey with the swineherd Eumaíos or the hulking Polyphem. Important landmarks in the development of the pastoral genre are the hexametric poems by the Greek, Sicilian or Syracuse-born, Theocritus. Around 300–260 B.C., he published around twenty Idylls in the so-called Corpus Theocriteum. Theocritus himself was an inhabitant of the antique metropolises Syracuse and Alexandria, and was highly literate, well educated, and versed in the facture of earlier genres. He positioned himself abreast his sophisticated readership, showing his characters in their dizzying roughness, primitive aggression, and obscene sexuality. The Idylls are literary allusions and realistic observations, but at the same time satire by “portraying superstitious shepherds and other rustics in such stylized attitudes as playful exuberance and amatory despair,” as the American literary scholar Lawrence Buell puts it. Furthermore, Theocritus transported his readers from their actual experiences of early large-scale urbanism and contemporary political disturbances to an idealized state in the form of a simple rural way of life. Thus, a “locus amoenus,” a pleasant place in nature, or, at first glance, harmonic ambience, was invented. The contrast between readers’ real urban life and peaceful rural life in poetic artifice is nuanced via a temporal contrast with readers’ current and pastoral past. The foremost characteristic of pastoral poetry is that its power derives from these dichotomies between “rural and urban, country and courtly, simple and complex, natural and artificial.” The literature scholar Heather Dubrow states that these “binary oppositions [are]...
so fundamental that one suspects that if the genre did not exist the structuralists would have invented it.”37 It is consequently compelling that the *locus amoenus* is a setting opposite to the urban, which fluctuates according to actual social conditions and is therewith strongly variable, allowing us to understand an Arctic landscape as a *locus amoenus*, as we will see later. This would just be one of many adaptions and transformations undergone by Theocritus’s poems. They were soon and famously adopted by Roman poet Virgil (as *Eclogae* or *Bucolica*, 43–39 B.C.), and in subsequent centuries spread geographically beyond the Alps, to England, and to the U.S.,38 and, in terms of media, into music above all.39 It is the poems’ inherent musicality that renders them almost symphonic, and also evokes the Schaferian idea of soundscape.40 Sound and music shapes the Arcadian genre on three levels: firstly, and even commonly, by the phonetics of the lyrics, which create a musical atmosphere purposively; secondly via the narrative, which shows the shepherds as musically gifted men; and thirdly, through music’s expressions of the relationship between humans, land/nature, and authorities, which goes beyond being a mere decorative ornament of a story. This is shaped by three central aspects: Firstly, the poetry is interwoven with the sound of the words that echo music making, which is apparent in the so-called first Virgilian eclogue where Melibee sings (here in Latin to demonstrate the sounds):

\[
\text{Tityre, tu patulae recubans sub tegmine fagi} \\
\text{silvestrem tenui musam meditaris avena;} \\
\text{[…] formosam resonare doces Amaryllida silvas.} 41
\]

\[
\text{You, Tityrus, under the spreading, sheltering beech,} \\
\text{Tune woodland musings on a delicate reed;} \\
\text{[…] Make woods resound with lovely Amaryllis.} 42
\]

Whereas Theocritean vowels resemble the shepherd’s rustic pipe, in these verses, the accumulation of m-sounds would suggest verbal music. This interpretation is confirmed by the fifth line, stating that the forest was echoing human song.43 The echoing is one of many moments in which we can experience the close connection between human and nature expressed through music that pervades all poems.

39 Allen, “Symphonic Pastorals.”
41 My italics.
Secondly, music and song are almost omnipresent in the shepherds’ land. It was the God Pan who gave pipe and syrinx to the shepherds (“Pan taught us how to bind close-fitting reeds”), and whose musical skills are considered as desirable (“In the woods with me you’d learn to pipe like Pan”). Music not only accompanies the *otium* (“ease”), but is also a means to boast one’s musical strength, as Virgil clarifies in the following description of a competition:

Eclogue III

Palaemon (3.55-59)
Speak out, since we are couched on yielding grass.
Now burgeons every field and every tree;
Woods show their leaves this loveliest time of year.
Begin, Damoetas, follow then, Menalcas:
Recite that answering verse the Muses love.

Damoetas
Muses, begin with Jove, the omnipresent:
Lands he sustains; my songs are his concern.

Menalcas
Phoebus loves me, I’ve always gifts for him –
Laurel and sweetly blushing hyacinth.

[…]

Palaemon
It’s not for me to settle such a contest.
You each deserve a heifer – as do all
Who fear love’s sweets or taste its bitter woes.
Shut off the streams; the fields have drunk enough.

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44 It is only the men who sing and pipe, whereas the girls are silent. The reason therefore is supposedly that the pipe itself is female.
Thirdly, music is not only a decorative ornament of a story, but expresses the relationship between humans, land/nature, and authorities. The opening verses of Theocritean poems put them subtly in relation to these, as the English poetry specialist Paul J. Alpers has shown:

Thyrsis
Sweet is the whispering music of yonder pine that sings
Over the water-brooks, and sweet melody of your pipe,
Dear goatherd. After Pan, the second prize you’ll bear away.
But if he choose the she-goat for his meed, to you shall fall
The kid; and dainty is kid’s flesh, till you begin to milk.

Goat herd
Sweeter, O shepherd, is your song than the melodious fall
Of yonder stream that from on high gushes down the rock.
If it chance that the Muses take the young ewe for their gift,
Then your reward will be the stall-fed lamb; but should they choose
To take the lamb, then yours shall be the sheep for second prize.49

According to Alpers, each of Thyrsis’s two speeches and the goat herd begin with a comparison between the music of man and the sound—or music—of nature, evoking sweet melodies of pipes and a sweet song by the shepherds, namely discrete and lucid sounds by the “pine that sings over the water-brooks.”50 There is an indication of equality that “suggests the harmony between the music of man and nature.”51 The formal symmetry is accomplished in the Greek original, where the most important word for nature sounds occurs in the same position in each speech, and is hence exposed.52 The contestants’ speeches are full of respect for the other and, important in our context, in “harmonious relation to the natural setting which they share.”53 Apparently, music is omnipresent in Theocritean and Virgilian poems; it is interwoven into literal artworks on several levels: on a phonetic level, in the plot, and to express the relation between man and place in nature respectively. Also, in the following Eclogue by Virgil, sound and music are the chosen means by which to negotiate a particular topic.54

51 Alpers, The Singer of the Eclogues, 74.
52 Alpers, The Singer of the Eclogues, 73.
54 Alpers, The Singer of the Eclogues, 74.
M elibee
You, Tityrus, under the spreading, sheltering beech,
Tune woodland musings on a delicate reed;
We flee our country’s borders, our sweet fields,
Abandon home; you, lazing in the shade,
Make woods resound with lovely Amaryllis.

Tityrus
O Melibee, a god grants us this peace –
A god to me forever, upon whose altar
A young lamb from our folds will often bleed.
He has allowed, you see, my herds to wander
And me to play as I will on shepherd’s pipes.55

Here, Virgil’s comes to an actual situation, which is far beyond ease or amusement, but of social sensitivity. His poems treat a moment in Roman history when—after the battle of Philippi in 42 B.C.—war veterans were offred land, for which inhabitants of the Mantuan territory had to be chased away.56 In this Eclogue I, shepherd Melibee is expelled from his locus amoenus and meets Tityrus, who was left untroubled by these governmental misappropriations. Melibee, being somewhat sentimental about his leaving, links the shepherd’s music and nature’s sounds closely together, while the relaxed, musicking shepherd causes the woods to echo the name of his lover. But Tityrus’s subsequent piping expresses that he is no longer free but dependent on the new patron, the so-called God who grants peace. While Melibee speaks of a “delicate reed,” Tityrus degrades it while speaking of “shepherd’s pipes” (“agresti”). Indeed, the latter’s expression for the musical instrument he uses describes it in a much less sublime or elegant manner than the delicate reed seems to be, indicating that the shepherd’s pipe is rather an earthy instrument.

Besides the reallocation of the population, environmental historian and historian of the Ancient World J. Donald Hughes considers environmental issues, such as overgrazing, soil erosion, depletion of wildlife and natural resources, and pollution of utmost importance for the Roman Empire and even contributing factors to its decline.57 Awareness of such environmental issues, including deforestation, is

55 Alpers, The Singer of the Eclogues, 11.
56 One who had a narrow escape of being expropriated was supposedly Virgil himself. Alpers, The Singer of the Eclogues, 68.
reflected in the *Eclogue* V, in which Menalcas mourns the logging of forests: “For gladness even the unshorn mountains fling their voices/ Toward the stars.”

In short, Schafer’s contributions to pastoral poetry offer some profound insights into this ancient mode that his illustrative approach hardly hints at. The thick description about music and environmental sounds in the Theocritean and Virgilian poems allow listeners to experience a partly idealistic space as an alternative to their actual life experiences. Beyond the idealizing descriptions of rural surroundings, the poems can further be read as a comment on listeners’ actual sociopolitical situations, which will be extended in the subsequent mode where the earlier fugacity or ephemerality is given more weight, and where awareness of the interconnectedness between humankind and nature arises.

In early modern adaptations of Arcadia, as reflected in paintings of Italian painter Guercino (Francisco Giovanni Barbieri, 1591–1666) and French painter Nicolas Poussin (1594–1665), the aspect of mortality occurs for the first time in Arcadian settings. The inscription “Et in Arcadia Ego” in their paintings refers rather ambiguously to a departed shepherd’s saying “I, too, lived in Arcadia,” as well as to the (long neglected) assertion that “Even in Arcadia there is death.” To symbolize the ephemerality of human beings, both painters added visual signs like human skulls and tombs, which, to art historian Erwin Panofsky, shows the “discrepancy . . . between the supernatural perfection of an imaginary environment and the natural limitation of human life as it is.”

In the anthropocentric modern pastoral literature, ephemerality no longer only applies to human beings, but increasingly to the understanding of the concept of nature itself. Nature has thereby shifted from being a “locus amoenus” (providing nurture) to being synonymous with ill-treated, which needs to be treated due to the threats caused for humankind. The human and natural world display pastoral characteristics when facing death as the “universal experience.” The gap in the dichotomy between nature and humankind becomes smaller in the context of interaction, which, in my understanding, is embodied in the Arctic, Subarctic, and Antarctic regions encompassing Greenland, parts of Iceland, Norway, Finland, Alaska, Russia, and the continent Antarctica, where the most distinguished geographical characteristics—snowflakes, icebergs, and glaciers—react in the most sensitive way to global warming, while vanishing in their former shape and concomitantly withdrawing living space.

Besides orally narrated and transmitted histories by indigenous peoples, generations of non-Arctic explorers and researchers, writers, and artists have contributed to the imagination of the Arctic, Subarctic

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58 Adapted from Garrard, *Ecocriticism*, 36.
60 Andrew Ettin, quoted in Glen A. Love, *Practical Ecocriticism*, 84.
and Antarctic regions, which has also gained the attention of composers, singers, and sound artists with research interests in Inuit traditions or other Northern societies. Their compositions encompass loose connections between music and natural phenomena such as the aurora borealis, which is associated with the Northern autumn and winter sky (e.g., Kaija Saariaho), and concrete eco-critical messages (e.g., John Luther Adams, Matthew Burtner), while ranging from translations of indigenous music traditions (e.g., Mari Boine, Tanya Tagaq) and folk music (e.g., Stan Rogers) to instrumental pieces (e.g., Barbara Pentland, Einojuhani Rautavaara), as well as instrumental and sound performances with singers and orchestra (e.g., Walde), radio feature-like compositions of sound recordings and recorded interviews (e.g., Polli) to field recordings (e.g., HIA and Biosphere, Vear, Winderen). In the following, I will examine—with the help of three examples from the latter—what soundscape recordings can offer, particularly with regard to their pastoral impact for an understanding of global warming.

Modern Pastorals in Subarctic, Antarctic, and Arctic Regions?

The first scientifically recognized consequences of human ecological behavior like forest dieback or ozone depletion were noticeable in the 1970s and caused the emergence of ecological parties, even though these remained rather absent globally. This occurred at the same time when Schafer, together with his colleagues, established the World Soundscape Project at Simon Fraser University and published his first essays on sound education, the music of the environment, and the sound study on Vancouver. Global warming has been advancing since, with a preliminary peak in 2016 since the beginning of temperature warming has been advancing since, with a preliminary peak in 2016 since the beginning of temperature

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62 Moss, Echoing Silence, here a discussion of the different perspectives on the Arctic.
measurement, and draws focus on the two pole caps. Although there are significant differences between the Arctic and Antarctic region concerning their geological nature as well as the global consequences of their ice-zones changing, they have, being both marine Arctic ecosystems, much in common and differ significantly from other marine systems. Their melting affects not only the local appearance of their immediate environment and societies, including human, fauna or flora, but will also cause dramatic global challenges, dangers, and suffering.

In their vastness, Arctic landscapes embody unique environments compared to most other regions or modern urban environments. Moreover, one dominant narrative regards the Arctic and Antarctic as that of dichotomy, noticeable in the opposites between its sublimity of appearance and its sensitivity of materiality, in being a local and unique phenomenon of global significance, and in both its repellency and importance for nutrition as the basis of the marine food chain. In these binary oppositions, Arctic and Antarctic landscapes can be regarded as modern interpretations of the Arcadian idea of dichotomy, as identified by Heather Dubrow above.

Present-day artists, such as those named before, as well as Glasgow-born Katie Paterson (b. 1981), Berlin-based musician Werner Dafeldecker (b. 1964), Australian composer Lawrence English (b. 1976), and Canadian artist Jamie Drouin (b. 1970) have toured the Arctic or Antarctic regions, who, despite their different backgrounds, have chosen sound recordings as the medium for their respective works, in which they communicate a clear message concerning the vulnerability of the region and, consequently, living populations. Their compositions should be understood not only as a contemplative way of receiving and perceiving utterances of the natural, but as objects about the world to allow listeners’ temporary realization of their relation to nature. For instance, Andrea Polli, sound artist and Professor of Art and Ecology at the University of New Mexico, explains that she chose the sonic approach in her explicitly eco-political artwork, as it was a “more visceral” approach for listeners, who, through the perception of sound, would feel like they had been transported to these places. In contrast to scientific studies, these soundscapes allow listeners to experience the quality of a place that many will not see themselves. Obvious here are the parallels to historical pastoral modes, in which literal soundscapes trigger audiences’ imagination of place and shape their attitudes toward it, as well as to the context of its reception. Similar to the imaginary Arcadia, the Antarctic, Subarctic, and Arctic regions represent a current alternative to the modern urban lifestyle, in which audiences encounter a place that is to many of them unfamiliar, including its hostility that necessitates specific equipment and preparation. Moreover,

70 Polli, *Andrea Polli and 90 Degrees South*. 
people’s imagination is shaped by the rare prospect of vastness and the idea of untouched nature, along with a certain acoustic and visual calmness in the sense of Schaferian’s hi-fi soundscapes with their inherent adventurous character. Above all, climate change reveals the ephemerality of the Antarctic, Subarctic, and Arctic landscapes and fauna. The domination of snow and ice unite the past, a time before global warming, and the present, represented by the progressing thawing and global warming, while water, both between the ice floes and on glaciers and in the ocean, signifies the future.

To exemplify their message, the Arcadian lyrics and modern Antarctic and Arctic soundscapes use remarkably similar acoustic means by using hi-fi sounds, i.e., sounds that can be perceived discretely. This is reflected in Polli’s description of glacial sounds as “totally resident,” as if they would “just echo into infinity.”\(^{71}\) Looking at the precise quality of specific recorded sounds helps to understand the analytic terminology Schafer has coined. For instance, he termed the respective object of sound that the listener is searching for “sound figure,”\(^{72}\) which, in our case, means sounds caused by ice and snow in their different states of matter and transitions. The “ground,” i.e., the context of these figures, is the landscape, which again consists of a significant amount of snow and ice. Its dominant sonic specificity is caused by the absorption of sound through the porosity of freshly fallen snow, lacking fauna, and relative absence of humanly caused sounds. Moreover, Schafer defined “sound signals” as those sounds that attract listeners’ attention, whereas the characteristics of a place are provided by so-called “sound marks.”\(^{73}\) And yet, in these landscapes, the different manifestations of ice and snow are simultaneously time sound figure, ground, sound signal, and sound mark. Listeners can experience this encounter of Arctic and Antarctic acoustic phenomena as a certain “wholeness,” as will be seen in the following examples.

**Dichotomies, Silence, and Listeners’ Experiences: Lawrence English and Werner Dafeldecker’s *Esperanza* (2010)**

The fieldwork by composer Lawrence English (b. 1976), who specifically focused on the bodily perception of environmental and musical sounds, and the piece *Esperanza* (2010)\(^{74}\) by Austrian musician Werner Dafeldecker (b. 1964) invites listeners to experience ideas about climate change *en passant*. While being invited by Argentinean Antarctic Chancellery to the Antarctic research bases Esperanza and Marambio for a one-month-stay in 2010, English and Dafeldecker created a sound collection of forty

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71 Polli, *Andrea Polli and 90 Degrees South*, min: 2:41–2:50. Note that the polar explorer Ben Saunders has stated that the idea of quietude in polar landscapes is not universally valid as there can be windy and therefore raucous spots, or, to put it in Schafer’s words: lo-fi surroundings (Ben Saunders, in: “Living on Ice,” [http://studiocanoe.com/living-on-ice/](http://studiocanoe.com/living-on-ice/), accessed 1 November, 2019).


73 Schafer, *The Soundscape*, 152.

hours of recorded material. They recorded sounds as the basis of their research, including seals, sea leopards holding power struggles on shore, whales, and thawing icebergs, which were recorded under the sea surface in Esperanza and sound mixed afterwards. In doing so, the team aimed to represent a wide spectrum of human and animal sounds, including sounds of water and ice, and the interaction between humans and animals, and the contrast of quietude and noise.

English and Dafeldecker thereby chose an artistic approach beyond documentary in such a way to allow listeners to perceive the place more emotionally. Indeed, according to the program notes, they aimed their work beyond documentation and toward a deeper emotional and cerebral experience. The following analysis of Arcadian theory and field recording techniques explains the efficacy of their composition: The use of sensor arrays allowed them to edit hi-fi quality sounds, as sounds could be extracted from their contextual noise and mixed afterwards. Sound and source stayed connected in the sound mix, instead of being led by the sounds’ materiality, which was supported by the diary’s chronological structure. Moreover, they edited the recorded data alongside a comprehensible narrative that expressed their own experiences in terms of the closeness to animal life, the stillness, the extremely dry acoustics, which, in consequence, they described as an exceptional state of mind. Even so, listeners are asked to go beyond comprehension, as English pointed out,

the music and sound works I create tend to invite people not only to listen deeply, but also to seek a personal understanding—they [the people, KL] create their own reality from their past experiences housed within the sounds I present—that can be literal or imagined.

On the literal level, Esperanza opens with human stepping sounds and the sound of a squeaking door, which is followed by sounds by the people working in the research base, including chattering voices, clanging hammer scales, phone ringing, and an approaching helicopter, underlined by a soft and deep rumble, which is abruptly silenced by crashing ice. What follows now is an atmospheric, soft rushing and quiet space, in which the sounds of a human loosening pieces of ice that are falling on metal can be heard. The rushing slowly gains intensity with slow throbs of metal that ousts the clinging of ice. Sounds by the Gentoo, Chinstrap, and Adélie penguins, which live in vast populations on the Antarctic continent, along with the chattering of the kelp gull come to the foreground, while their chattering accompanies the gradual fade out of the piece. What is striking is the acoustic merging of human and animal sounds, which derives from the fearlessness of the animals and their proximity to the humans, and which both artists

75 Here and in the following paragraph: English: Program Note for Esperanza.
experienced as central in this landscape.\textsuperscript{77} The quality of sound is depicted in such a way to allow listeners to experience the absolute “dry” silence,\textsuperscript{78} which Dafeldecker and English describe as atmospherically characteristic and as the keynote sound of this region. In this clearness of sounds, the (Arcadian) soundscape can take effect inside the listeners’ minds.

On an imagined level, the lyrics used by English describe the silent atmosphere and artists’ emotions, which make reference to German philosopher Martin Seel’s heightened contemplative reception of art in this process of listening to the soundscape.\textsuperscript{79} He also takes up the juxtaposition between human sounds and animal and environmental sounds, with the aim to show the interaction between humans and nature, which evokes the idea of an almost Arcadian imagined harmony of human and nature, depicted by the closeness of animal sounds and the silent sounds in these dry surroundings. The clinging ice is the foregrounding signal sound in this silent ambience of frozen landscape, which is usually unknown to urban citizens, and although listeners may be well informed about the hostility of the landscape,\textsuperscript{80} its very privacy is Arcadian. The harmony is disturbed by a humming sound—just as Pan roaming through Arcadia—but its fade out is accompanied by the penguins gabbling.

\textbf{Vanitas I: Katie Paterson’s \textit{Vatnajökull (the sound of)} and \textit{Langjökull, Snæfellsjökull, Solheimajökull} (2007)}

In several works, artist and sound artist Katie Paterson (b. 1981) has focused on the beauty of landscape and the magnificence of geological phenomena, and the knowledge of their fading away. Paterson also adapted the Arcadian motif of ephemerality, reception, and stunning beauty, as elaborated in the poems of Theocritus and Virgil, firstly in her 2007 work \textit{Vatnajökull (the sound of)} \textit{A live phone-line to Vatnajökull glacier}, for which she installed an underwater microphone into Jökulsárlón lagoon located in Europe’s largest glacier Vatnajökull in south-eastern Iceland. One large part of the glacier Vatnajökull, called Breiðamerkurjökull, turned into a lake in 1933 and became connected with the open sea. The decrease of the glacier reached around 5.6 km by the end of century, and continues to shrink at a velocity of 500 meters per year. While this shrinkage is due to rising temperatures after the Little Ice Age in 1890, the velocity has accelerated in recent years, as the lake has grown from 15 km\textsuperscript{2} in 2000 to over 21 km\textsuperscript{2} in 2009, with rising temperature from seawater being the most impacting factor.\textsuperscript{81}

\textsuperscript{77} English and Dafeldecker, program notes, \textit{Esperanza}.
\textsuperscript{78} English and Dafeldecker, program notes, \textit{Esperanza}.
\textsuperscript{79} Seel, \textit{Eine Ästhetik der Natur}, 262.
\textsuperscript{80} English and Dafeldecker, program notes, \textit{Esperanza}.
Visitors of the exhibition in UCL’s Slade School of Fine Art were met with a neon sign showing a mobile number, which was available from any phone and country in the world, and connected the caller to a pre-installed microphone and amplifier, while listening live to the sounds of the eroding glacier. The caller heard the soft, hissing noise of the continuously flat phone line, moderately soft impulses caused by the gurgling of water modified via the transmission of high frequency clattering, and irregularly repeated, moderate attacks of a lower pitch crackling. The keynote sound or “fundamental tonality” of the piece, spoken in a musical language, was that of the medium of the phone line. Its specific hissing sound modification forced a distance between sender and recipient, through which the absence of the glacier became tangible. However, as only one person could be connected at any one time, sender and receiver were in an unique situation in which the sound of the glacier was heard through the ear of the receiver with nothing else between them. This intimacy provided an immediate contrast to the urban context of Slade Gallery, Gower Street in London, where Paterson’s work was first displayed in 2007. The sound signals of the rippling water supported the intimacy, which makes further obvious the melting of the glacier. Those who engaged with this sound artwork could experience the tight connection between sound and time. The listeners were aware of the glacier while listening to water, and became witnesses of the thawing ice by experiencing two physical states of water: frozen and liquid. Sound and time worked together to emphasize the antipode to the utopian ideal of an intact glacier. Although steady and in high frequency, the sonic impression of melting water is that of quietude. These silent sounds stand in stark contrast to the phenomenal physical size of the glacier, to climatic processes and their global impact on melting ice, and also signify the contrast between the glacier’s age of over two thousands and the fast pace of its fading away. The dichotomous disposition of the work, its inherent conception of distance, and message of ephemerality signifies the growing awareness of the absent ideal, organized within an expressive spatial and medial layout and communicated by silent sounds, which completely parallels the conception of Arcadian works.

Paterson’s other sound installation Langjökull, Snæfellsjökull, Solheimajökull (2007) picks up once again the acoustic concept of vanishing and ephemerality, in which basic ideas of Vatnajökull (the sound of)
are employed as well. Paterson recorded the melting of three other Icelandic glaciers, Langjökull, Snæfellsjökull, and Solheimajökull, and edited the sound of their melting waters into three LP records. While the artistic medium of the “ice record” was developed by Claudia Märzendorfer (b. 1969) and Nik Hummer (b. date not stated) and premiered in Vienna in 2005, Paterson’s work is new in using the medium explicitly to convey an eco-critical message. A comparison to, e.g., Roni Horn’s (b. 1955) Vatnasafn/ Library of Water (2007) shows a crucial difference: Roni Horn’s environmental work alludes to the vanishing of ice by showing water in large clear columns, creating a classical exhibition with the aim of preservation and availability, and to show the ephemerality of human identity. By contrast, Paterson strengthens Horn’s aim by applying Marshall McLuhan’s dictum of the medium as message itself. The recordings of frozen melt water signify ephemerality at once, as the old-fashioned, yet iconic, LP reconnects the times prior to climate change, which can be read as a lost ideal. On the acoustic level, listeners hear moderate rushing (in the background) and rapidly warbling water as sound signal, with additional softly pulsating needle clicks. While the sound signals of melting becomes the keynote sound of the work, first loudly rushing, then gradually fading out. At the same time, media (e.g. microphone, telephone, record player, and DVD player) are the only obvious human footprints on the records as a whole. The recordings were made on three DVD playing simultaneously on three screens. Consequently, the audience watching the installation finds itself in an Arcadian setting due to their distance to the object, which is doubled by the DVD and turntable, which reminds of the distanced ideal fading away, as signified by the record and the sound of the warbling water. The softness of the sounds in the first phase, strengthened by the clicking needle, stands in stark contrast to the phenomenon of melting and the cold landscape itself, and is as such an arrangement with soft sounds but also (hidden) danger that is known in Arcadian settings. After a second acoustic phase of intensifying rushing and increasing distortion and consequent disturbance, the sonic artwork dissolves ephemerally.

Vanitas II: Jamie Drouin’s Perimeter: Sarichef (2011–2013)

The third work to help illustrating my points is by composer Jamie Drouin (b. 1970), who dedicated his sound work Perimeter: Sarichef (2011–2013) to the exploration of the landscape in western Alaska, in particular the Sarichef Island. Originally, the work was conceptualized as an installation with 24 equidistant loudspeakers representing the 24 recording stations around the island. It was released in CD format as The Island and gives an auditory narrative of climate change in this region. With a visual arts background, Drouin is neither a sound collector nor feels drawn to follow Schafer’s work, but aims to

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explore spatial positioning via the perception of rooms and his own special positioning. In his non-
documentary sound works, he applies the specific functions of sound in distinct opposition to any other
kind of soundtrack.

Drouin’s interest in the Sarichef island stems from his interest in the acoustic exploration of
spatial positioning, which he explored previously through an acoustic experience of the perimeter of
Vancouver Island and the work Snow: Field with Lance Austin Olsen in 2003. Correspondingly, in the
installation of Perimeter: Sarichef, the audience finds itself in the midst of 24 loudspeakers imparting an
almost physical experience of the island itself and its physical dimensions, while moving beyond the reach
of the loudspeakers would mean moving sonically away from the island. Although Drouin is primarily
interested in the way sound works for listeners, in Perimeter: Sarichef sound is experienced with the
awareness of ephemerality, as the island has become well-known as the physical manifestation of climate
change. As the retreat of sea ice opens vast oceanic areas, storms now blow thousands of miles over the
Arctic sea before they meet the coast of Sarichef with more power than they used to have. Moreover, the
costal bluffs are supported by permafrost underneath and are now being washed out, with the resulting
erosion leading to the receding of the shore. The artwork is thus a time capsule of a place, which is
shrinking and will disappear in foreseeable time. Although revetments are built to protect at least the
main village Shishmaref, the relocation of the Inupiaq community’s several hundred people is most
certainly inevitable.

Drouin surrounded the about 4.3 mile-long and less than one-mile wide island in the Chuckchi Sea with his recording equipment, and created “a sonic ‘time capsule’ of the island’s receding perimeter.” He waived any dramatic noises of disappearing housing (which exist), but recorded via four different recording techniques the sounds of the island at different points of the day, both above and under the ocean’s surface. The resultant 40-minutes sonic work is divided into several sections that organize the work in an almost sculptural manner reminiscent of Richard Serra’s idea of space as material and steel objects in rural surroundings. The work contains sections with sublime and gentle sounds, acoustically pictured by the rushing sea as keynote sound, along with sound signals by sea birds’ chirping, all of which envision an almost “pastoral waterscape.” The sections are clearly separated by general pauses from sections of almost violent sounds, such as an overwhelming rushing, ocean waves and electrical generators, buffeting wind mixed with the static crackle of burning waste. At the end of the composition,

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89 Jamie Drouin and Lance Austin Olsen, Snowfield, sound installation at Folly Gallery (Lancaster, UK, 2003); SnowField, limited edition (Infrequency (Canada) 2003), or: SnowField + remix, 2x 5" CD (Infrequency, Canada, IN001, CD).
90 Jamie Drouin in an interview with the author, 31 October, 2018. I am very grateful that Jamie Drouin shared his reflections with me.
92 Drouin, The Island.
93 Description of Drouin, The Island.
listeners hear what sounds like radio static but in reality is the island in the process of disintegrating as the permafrost breaks down, recreating the sound of the hissing vacuum between the sand particles. With The Island, Drouin creates a highly textural collage, in which the particularities of human and non-human sounds blend together to create an almost violent, physical sound experience of a shrinking place. Indeed, Drouin records human-generated sounds like those of energy generation, waste disposal, and recreation. The acoustic attraction to Northern remote landscapes, which is to a certain degree the highly defined, hi-fi surrounding that allows the recorder to foreground specific sound, is herewith annulled. Thus, the background sound of lo-fi quality comes into the center of listeners’ attention. Contrasting to English and Dafeldecker’s work, and Paterson sonic artwork, Drouin presents human sounds in a disturbing manner, and takes human beings, not restricted to the island’s inhabitants, to responsibility. All in all, his work on the ephemeral island Sarichef is the most pitiless and ruthlessly honest, using sound to mediate to listeners a corporeal experience of the cruelty of climate change and its impact on nature and humankind.

Outlook

Both the sound works of English and Dafeldecker and Paterson invite listeners to perceive the remote Arctic and Antarctic in a potentially contemplative, emotional way. Above all, it is Paterson who silently, almost gently, documents the phenomenon of melting ice in the Icelandic glacial structure via the hi-fi soundscape of gurgling melting water. Her work represents the Arcadian idea of imaginary landscape as an opposite to audiences’ real environments. The dichotomy is—among others—drawn out through acoustic depictions of place in a clearly or hi-fi defined manner. These poetic soundscapes are paralleled by Paterson’s silent sounds, which stand in stark contrast to the lo-fi soundscapes of urban environments. Paterson’s work represents the opposite to that, while at the same time giving room to the blending of lo-fi sounds of artwork and real world with increasing numbers of record-breaking melt rates. All works discussed here reveal climate change on another level. Although the microphones also absorb human-induced sounds in these remote places, the Arctic setting allows hi-fi recordings at least to a certain extent. As such, the problems surrounding noise pollution that initiated Schafer’s first soundscapes of Vancouver become indirectly obvious. In addition, they presents an archaic connection between humans and nature. But the idea of the pastoral goes far beyond idyllization, as has been shown above.94 Jamie Drouin has chosen a more direct dramatic expression to define a vanishing space in his work, clearly marked by the Arcadian principle of ephemerality. What makes it a most convincing anthropocentric pastoral is its directness in recouping the cause of grief, which is, as far as we know, humankind. At the same time,
Drouin manages to arrange sounds in a way that allows audiences experience viscerally the accusation of humankind of its lack for insight.