

# Auditory Aesthetic Values and Environmental Protection in Antarctica

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The 1991 *Protocol on Environmental Protection to the Antarctic Treaty* explicitly mentions the obligation to protect the intrinsic values of Antarctica, which are presented as including “aesthetic values”. Little guidance, however, is given on what counts as aesthetic values nor how to protect them on behalf of Antarctica’s environment. Discussions of aesthetics experiences and values have tended to focus on the visual. Viewed broadly, though, our range of aesthetic experiences surely encompasses a wider range than that. I argue here that we may make further progress on protecting the aesthetic values of Antarctica by focusing as well on auditory examples. Recognizing both the power of auditory experiences, and articulating how they may be catalogued and evaluated can help us widen the net of aesthetic values and in so doing further help strengthen environmental protections in the Antarctica context.

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A main cause of philosophical disease—a one-sided diet: one nourishes one’s thinking with only one kind of example.  
Ludwig Wittgenstein (*Philosophical Investigations*, 2009, §593)

Among the noteworthy features of the *Protocol on Environmental Protection to the Antarctic Treaty* is its explicit mention of the obligation to protect the intrinsic values of Antarctica, which are presented as including “aesthetic values”.<sup>1</sup> At present there is a literature, albeit a small one, on how recognition and appreciation of aesthetic values can bolster environmental protection in the Antarctic. That literature, however, has focused almost exclusively on visual aesthetics. But that is needlessly limiting. Our range of aesthetic experiences surely is broader than that, and auditory experiences can be just as powerful, if not more, than visual ones. That is the upshot of the quotation from Wittgenstein above. Philosophers, and art historians for that matter, have tended to feast on a one-sided diet of visual examples. In this short paper I aim to begin to remedy that, by exploring the

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<sup>1</sup> The Antarctic Treaty, 1961 (referred to herein as AT); *1991 Protocol on Environmental Protection to the Antarctic Treaty*, otherwise known as “Madrid Protocol”, henceforth “EP”. There is, of course, some unclarity about the exact wording and intent of Article 3, whereby on one reading, aesthetic and wilderness values are to be understood as types of intrinsic value. On another parsing, intrinsic, aesthetic, and wilderness values are all distinct. Finally, there is the issue of whether aesthetic and wilderness values are to be treated as synonymous or whether each is to be treated differently. I will not pursue these questions further, though a fuller discussion would involve require reference to any preparatory documents that might exist from the ATCM meetings prior to the final text of EP.

power of what I'll call "auditory aesthetic values" and how in the context of Antarctica they can be called upon to help strengthen environmental protections there.

### Environmental Protection and Aesthetic Values

Article 3 of EP declares the importance of recognition and protection, not only of Antarctica, but also its "wilderness and aesthetic values and its value as an area for the conduct of scientific research", which "shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area" (EP, Article 3). This is further specified in Annex V of EP, "Area Protection and Management", where aesthetic values are mentioned again, in the context of specifying how areas of Antarctica are to be chosen for (varying) levels of protection.<sup>2</sup>

In particular,

1. Any area, including any marine area, may be designated as an Antarctic Specially Protected Area to protect outstanding environmental, scientific, historic, aesthetic or wilderness values, any combination of those values, or ongoing or planned scientific research.
2. Parties shall seek to identify, within a systematic environmental-geographical framework, and to include in the series of Antarctic Specially Protected Areas...
  - (g) areas of outstanding aesthetic and wilderness value. (EP 1991, Annex V, Article 3)

Of course, what is not provided is an articulation of how such areas of aesthetic value are to be identified and assessed. Nor is there guidance provided on how to understand the more fundamental question of what aesthetic values are in the first place. As various commentators have pointed out, this is perhaps not surprising, as the role of aesthetics in the law, in general, and in environmental protection more specifically, has typically been under-developed.

That is not to say, however, that there is a total dearth of attention to the importance of aesthetic values. To give just one example from the international realm, The World Heritage Convention (1972), signed by 195 countries, holds that

Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate... (UNESCO, 1972)

"Natural heritage" in turn is defined as including "natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty" (UNESCO, 1972, Article 2).

And as for one example from a domestic context, the pathbreaking US case of *Scenic Hudson Preservation Conference v. Federal Power Commission*, commonly known as the "Storm King case", noted that:

In order to insure that the Federal Power Commission will adequately protect the public interest in the aesthetic, conservational, and recreational aspects of power development, those who by their activities and conduct have exhibited a

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<sup>2</sup> "For the purposes set out in this Annex, any area, including any marine area, may be designated as an Antarctic Specially Protected Area or an Antarctic Specially Managed Area. Activities in those Areas shall be prohibited, restricted or managed in accordance with Management Plans adopted under the provisions of this Annex" (EP 1991, Annex V, Article 2).

special interest in such areas must be held to be included in the class of “aggrieved” parties under s. 313 (b). We hold that the Federal Power Act gives petitioners a legal right to protect their special interests. (Hays, 1965, as discussed in Riesel, 1981)

### **Auditory Aesthetic Values**

Should States that are signatories to EP wish to respect their obligations to protect areas in Antarctica with aesthetic values, one must ask, *inter alia*, *which* areas? Even more challenging, perhaps, is deciding which aesthetic criteria should be used. For our purposes here, I’ll begin by noting that even a cursory glance at discussions of such values, be they in domestic or international contexts, shows a nearly exclusive focus on *visually* striking landscapes.

In her important work on aesthetic values in Antarctica, for instance, Codling focuses on landscapes, given the awe-inspiring nature of the Antarctic terrain that is her primary focus.

Landscape is taken to refer primarily to the environment as visually perceived: the appearance of the land, ice, and sea, including factors such as shape, colour, and form and the way in which various components combine to create specific patterns and pictures, distinctive to particular localities. (Codling, 2001; others look to follow her lead in focusing on the visuals of landscapes, such as Summerson, 2011)

The centrality of visuals is nicely summarised this way as well: “Clearly the appreciation of landscape is primarily aesthetic and derives as much, if not more, from the spatial relationship of visible resources as from their mere presence in the scene” (Duffield & Coppock, 1975, p. 146).

Crucially, however, the range of human aesthetic experience goes well beyond that of visual experience.<sup>3</sup> In particular, the power of sound, be it in the form of music, of sounds in nature (e.g. bird songs, rustling of leaves, wind, etc.), of noise, etc., is another central part of our experience of the world.<sup>4</sup> Certainly it makes sense to at least inquire whether the value of that type of experience—of auditory aesthetic experience—has a role to play in appreciation of Antarctica, and in the protection of those “aesthetic values” in EP we began with. In the remaining sections of this paper I will suggest it does.

### **Scenes and Sounds in Antarctica**

Visitors to Antarctica often comment on the combination of sounds they encounter, from wind and the calving of glaciers to the sounds of penguins, and the enveloping silence.<sup>5</sup> “When people first arrive in Antarctica,

<sup>3</sup> For more on debates about the nature of aesthetic experience, refer to discussions in “Aesthetic Experience”.

<sup>4</sup> A fuller treatment of the importance of *auditory* events, certainly relevant to environmental protection, would explore the nature and damaging effects of noise. In addition to the numerous domestic regulations of noise pollution there are also various international agreements, many of which take their point of departure from the broad definition of “pollution” given by the Group of Experts on the Scientific Aspects of Marine Environmental Protection” (GESAMP), viz.: “[T]he introduction by man, directly or indirectly, of substances or energy to the marine environment resulting in deleterious effects such as hazards to human health; hindrance of marine activities, including fishing; impairment of the quality for the use of sea water; and reduction in amenities” (Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), 1990). A short primer on distinguishing sound from noise, and some of the harmful effects of the latter can be found at Sound vs. Noise, <https://letstalkscience.ca/educational-resources/stem-explained/sound-vs-noise#>.

<sup>5</sup> One might question whether silence counts as an auditory experience, given that it seems to be the absence of sensory input. But encountering such silence is often reported as an important part of experiencing Antarctica. A fuller examination of this issue would explore John Cage’s famous 4’33”, as the paradigm of how silence can be a part of a powerful aesthetic experience. See a performance of this piece at <https://www.youtube.com/watch?v=JTEFKFiXSx4>.

many are struck by how quiet it is. But there are sounds that break the deathly silence" (Discovering Antarctica, n.d.).<sup>6</sup>

The challenge, of course, is to find suitable criteria for distinguishing sounds that count as part of aesthetic experience from those that do not, and then using those criteria to demarcate areas in Antarctica that are to be protected. How, for instance, do we distinguish hearing the sounds of penguins in the distance as important auditory aesthetic experiences from, say, the distant sounds of a ship's engine? Even worse, one might think, is that what counts as an aesthetic experience, much less a valuable one, is based on individual's subjective preferences. Beauty, it is said, is the eye of the beholder.<sup>7</sup>

Here I think a particularly useful strategy emerges from the writings of Rosamunde Codling.<sup>8</sup> In her work on landscapes, she distinguishes the project of describing different landscapes from the separate project of evaluating them. The latter is arguably the more difficult, as it will require judgments of better and worse, which of course brings in the challenge of individual preference. That project, however, requires one first make distinctions of different landscapes, that is, a more straightforward project of description.

It suggested that the most meaningful approach to landscape assessment should be based on survey and classification of landscape character, with evaluation of quality only taking place after establishment of character.

The landscape assessments of the 1990s clearly separated the classification and description of landscape character (what makes an area different or distinct from another) from landscape evaluation (what makes one area "better" than another). (Coddling, 2001, p. 342)

As an example, she discusses the strategy of demarcating different regions by purely descriptive means, i.e. non-evaluative ones.

The ultimate aim of Landscape Character Assessment in the Antarctic should be the description and classification of the whole of the continent into groupings based on landscape types. These classifications should be carefully structured and developed from each other. The most recent note offering guidance for Landscape Character Assessment expresses the process thus:

Ideally assessments at different scales should fit together as a nested series or a hierarchy of landscape character types and/or areas so that assessment at each level adds more detail to the one above. The analogy of "Russian Dolls" is often used to describe this hierarchical relationship, but the idea of a camera zooming in, from a distant broad view, to a detailed small scale portrait, also makes the point. (Codling, 1999, p. 344)<sup>9</sup>

The second project, of aesthetic evaluations of those different regions, is of course the more challenging. Here a "stakeholder strategy" is employed. "In relation to the Antarctic, stakeholders would include all visitors to the continent, whether representatives or workers from the Antarctic Treaty nations, or tourists and the companies involved in promoting visits" (Codling, 1999, p. 345).

<sup>6</sup> The Sound of Silence, <https://discoveringantarctica.org.uk/introducing-antarctica/imagining-antarctica/the-sound-of-silence/>. Further testimonials are readily found online. For instance: <https://www.bbc.com/news/science-environment-64514258>; <https://arteeast.org/quarterly/silent-continent/>; <https://bitbel.pbsci.ucsc.edu/testimonials/the-calm-and-quiet-antarctica-continent-7/>; <https://www.youtube.com/watch?v=35QEU09XHxU>; <http://om-annex.s3-website-us-west-2.amazonaws.com/origins/antarctica/fieldnotes/antarcticsounds.html>.

<sup>7</sup> Benjamin Richardson's work takes on directly this and other challenges. For instance, Richardson, 2019 and 2021.

<sup>8</sup> As put forth first in her Ph.D. dissertation and then in subsequent writings. See for instance, Codling, 1999.

<sup>9</sup> A similar strategy is employed by Summerson, namely of first describing different regions in Antarctica, followed by investigating the different evaluations of those regions by those who have encountered Antarctica either first hand or following viewing of photographs. Duffield & Coppock, 1975.

One result of surveys of those stakeholders was their apparent preference for “landscapes in which there is a combination of varied elements, and which have topographical ruggedness and varied relative relief” (Codling, 1999, p. 346).<sup>10</sup> This is noteworthy, as it seems to reflect a preference for contrast, which has arguably formed the basis for much of at least Western-art (visual, that is) evaluation (van Dongen & Zijlmans, 2017, p. 283).

### Evaluating Antarctic Sounds

Were we to follow this strategy for auditory aesthetics in Antarctica we might first wish to articulate various ways to measure and thereby distinguish different types of sounds one encounters there. The science of sound, of course, is complicated, just as the science of colour is.<sup>11</sup> Relevant variables used to analyse sounds include, among others, frequencies, volume, their dynamic range (the difference between the loudest and quietest parts of a sound), their echo, delay, and reverb (McDermott, 2012, p. 227).

With that at least as a start on distinguishing sounds, one might also be able to map different ranges in Antarctica based on what types of sounds are heard where. Of course this will also include, importantly, regions where there is almost no sound at all. And as in the case of paintings and landscapes, contrasts will be important, both where there are mixtures of different kinds of sounds, and changes from places with various sounds to ones of relative quiet. As a complicating, but nonetheless important factor, one might want to pay attention as well to sounds at a given time but also diachronically—that is, over time and how they change in different regions.

Should one arrive at such a “sound-map”, the next step, at least following the method of Codling sketched above, would be to provide a way of evaluating such distinguished sound-regions. One might again draw upon a wide-range of visitors to Antarctica, and perhaps expanding such “stakeholders” to include potential visitors to Antarctica, or even a wider range. The goal would be to provide a range of sonic experiences to such stakeholders with an eye (ear!) to ranking their preferences. A thorough investigation would have to account for possible cross-cultural differences. Still, there are some sounds (given their frequencies, volumes, etc.) that very well might be universally appealing and ones that are universally repelling. Nails on a chalkboard, with their sharp high frequencies, stand out as an easy example of the latter (McDermott, 2012, p. 230). Extremely loud sustained frequencies, think here of a nearby jackhammer, would also be expected to be universally disliked.

Gentle breezes and the rustling of leaves, in contrast, might be expected to have frequency ranges that many find soothing. One might also be aware of how various sounds used in therapeutic settings, as many types of sounds have been thought to be soothing and even healing, such as the sounds produced by Tibetan singing-bowls (T. L. Goldsby, M. E. Goldsby, McWalters, & Mills, 2017). Seeing if those kinds of frequencies are present in Antarctica might help provide an “objective” basis to help ground people’s individual sound preferences. As part of a broader context, auditory preferences are not linked solely to *aesthetic experiences*, for much energy, research, and money have been put into selecting the qualitative character of the “voices” of various audio

<sup>10</sup> Preference ranking is a notoriously fraught subject. A discussion of the various issues can be found at <https://plato.stanford.edu/entries/preferences/>.

<sup>11</sup> For an excellent anthology of papers on the science of colour and colour perception, see Byrne and Hilbert, 1997.

interfaces, such as Siri, Alexa, the Google-map voices that speak to us while we drive, etc. (Schutz & Stefanucci 2019). The point, that is, is that there is already a well-established data base on how we experience sounds, all of which can be helpful in constructing a preference ranking. The value of that ranking, again, is that it can be used to help designate the areas in Antarctica that are to be designated for special protective status.

### Soundscape Art

Art has the power to not only move people emotionally, but also to effect social change. Among various examples, the landscape paintings of Thomas Moran and others have been credited with helping to establish Yellowstone National Park in 1872. At a time when most people did not have the opportunity to see it in person, the awe-inspiring paintings created a sense of wonder and helped generate both interest in the area but more importantly an understanding of its beauty that needed protection.<sup>12</sup>

Turning our attention from such landscapes to what I shall refer to as “soundscapes” we might reflect on their potential power as well.<sup>13</sup> One way to put this into practice would be to incorporate so-called soundscapes or field recordings into musical works of art.<sup>14</sup> There is certainly a well-established precedent for this in popular music, dating back at least to music from the 1960s and 1970s, where various bands added non-instrumental sounds to their music—sounds of cash registers, barking dogs, traffic noises, cheering crowds, etc.<sup>15</sup> And though pleasant, soothing sounds were mentioned above, there is certainly no musical or artistic reason to imagine environmentally focused music must make use of only such sounds. Art can be moving because it is provocative, even disturbing, after all, and sometimes because it *is* disturbing.

### Conclusion

The Environmental Protocol to Antarctica stands out for obliging States to protect, *inter alia*, the aesthetic values of Antarctica. I have sought to show that in pursuit of this we should consider expanding the range of aesthetic experience and values beyond those of the visual landscape. Music, and sounds more generally, have the power to move people emotionally, and also socially and politically. There is every reason to think they can be employed to further environmental protections as well. Though I have only broached the tip of the sonic-iceberg, I hope to have at least indicated promising lines for further research.

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<sup>12</sup> Here as elsewhere I have benefited from the writings and lectures of Benjamin J. Richardson.

<sup>13</sup> There is as well an emerging field of “soundscape ecology”, seeking to both understand and incorporate insights from the science of sound into understandings of the interplay between nature and human’s experiences of it. See Pijanowski, Villanueva-Rivera, Dumyahn, Farina, & Krause, 2011; Pijanowski, Villanueva-Rivera, Dumyahn, Farina, Krause, Napoletano, Gage, & Pieretti, 2011.

<sup>14</sup> An excellent manual on techniques for field recordings of such soundscapes is given by Krause, 2016. For those unable to make field recordings themselves, there are already many available resources. The BBC, for instance, has an archive of recordings that one can access and incorporate into their own musical works, including ones from Antarctica: <https://sound-effects.bbcrewind.co.uk/search?q=antarctica>. I have made use of similar sounds recorded in Greenland, incorporating them into two musical works on a recently produced album, under my one-man band’s name, Type/Token. The first makes use of those recordings, along with my reading a passage from the famous Norwegian explorer Fridtjof Nansen, from his 1893 book, *Eskimo Life*. <https://soundcloud.com/eruby515/greenland-part-1-the-song>. The second continues the theme and is the final track on the album. <https://soundcloud.com/eruby515/greenland-part-ii-the-song>.

<sup>15</sup> A few examples include: Pink Floyd, “Time”, <https://www.youtube.com/watch?v=Qr0-7Ds79zo>; Pink Floyd, “Money”, <https://www.youtube.com/watch?v=2aW7HweAf3o>; The Beatles, “Yellow Submarine”, [https://www.youtube.com/watch?v=m2uTFF\\_3MaA](https://www.youtube.com/watch?v=m2uTFF_3MaA); The Who, “I Am the Sea”, <https://www.youtube.com/watch?v=nyN7WUKRicw>; The Who, “Sea and Sand”, <https://www.youtube.com/watch?v=o-f3LnfdSC0>.

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