

How Does Music Tell Stories about Climate Change?

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Keywords: Activism, Aesthetics, Behavior, Emotions, Environmental philosophy, Mimesis, Protest, Sound art, Soundscape.

Along the outside wall of Harvard University's John Knowles Paine Concert Hall runs a freeze with a short paean to music: "To charm, to strengthen, and to teach / These are the three chords of might." These lines, culled somewhat awkwardly across two quatrains of Henry Wadsworth Longfellow's poem "The Singers," have gained new relevance in the fight to halt climate change. After all, there is a growing consensus among environmental activists that the arts have an important part to play in the fight against climate change. At least since the Horatian maxim *Aut prodesse volunt aut delectare poetae* (poets wish to be beneficial or to delight), it has been widely known that the stories, images, and forms of art are, at their best, capable of moving their audiences, of raising awareness, even of changing behaviors. That individual works of art can bring about profound societal change is documented, for instance, in Harriet Beecher Stowe's best-selling novel *Uncle Tom's Cabin or Life among the Lowly* (1852), which gave a major boost to abolitionism in the years leading up to the American Civil War.¹ Or think of the haunting photo of five children during the Vietnam War, among them the naked and badly burned nine-year-old Phan Thị Kim Phúc, screaming in pain and running toward the camera, widely known as "Napalm girl" (1972), which gave vivid

¹ This is not to deny that the novel was also exposed to a wave of criticism, perhaps most famously in James Baldwin's essay "Everybody's Protest Novel" (1949), for its stereotypical and patronizing treatment of Black characters.

testimony to the horrors that the US attacks visited upon the Vietnamese population and helped, arguably, end the Vietnam War.² Or take the impact of the AIDS quilt (begun in 1987) that visually memorialized over 50,000 of its victims and, crucially, preserved their humanity, at a time when a diagnosis with the “gay plague” was not only tantamount to a death sentence but specifically an ignominious one that carried enormous social stigma.

The burning question, in this ecological context, is how these powers of art can be harnessed to bring about change in our collective behavior that will benefit the environment and especially slow the effects of climate change. Narrative art forms especially, such as novels and film, have made a major impact in this regard. The genre of climate fiction (or cli-fi) is now a recognized branch in the literary field. As the political barometer in the mid-2020s slips rightwards, admittedly, Hollywood film production has been a little more reluctant to embrace climate change as an explicit issue, though public awareness has advanced to such a degree that a film like the blockbuster *Twisters* (2024) raised eyebrows for *not* placing environmental concerns front and center.³

In fact, reflections on climate stories in the narrative arts have come into focus about how the main storyline must be varied so as to avoid a habituation effect. After a number of hard-hitting apocalyptic or dystopian stories—think of Octavia Butler’s

² While the image was initially published under photo journalist Nick Ut’s name, there are recent allegations that the photo was not in fact taken by Ut but by a freelance photographer, Nguyễn Thành Nghệ. While there is no conclusive evidence, the photo is now unattributed.

³ Commentators argue that the move away from environmentalist causes is part of a new Hollywood strategy to woo conservative viewers by dropping a “woke” agenda (which for them includes mention of climate change), see Brooks Barnes, “Hollywood’s message to red states: Our movies are for you,” *New York Times*, July 28, 2024. The producers of the movie are avowedly more interested in Horace’s *delectare* than the *prodesse* part.

harrowing novel *The Parable of the Sower* (1993), Margaret Atwood's *Oryx and Craig* (2003), or Roland Emmerich's visually stunning blockbuster *The Day after Tomorrow* (2004)—a swelling chorus of voices urged the culture makers in the last few years to consider alternatives. This call for “new climate stories”⁴ brought forth such works as Adam McKay's biting political satire *Don't Look Up* (2021) or Kim Stanley Robinson's darkly optimistic *The Ministry of the Future* (2020), which both sought to strike a new balance. Even Disney entered the fray with the uncharacteristically dialectical and exquisitely diverse animation *Strange World* (2022), which brought a distinct note of hope into play. Rebecca Solnit and Thelma Young Lutunabua compiled an anthology of climate-related texts with the programmatic title *Not too late* (2023). A similar ploy is noticeable in the political arena: as the climate-related news is becoming increasingly grim, in one ineffectual UN report after another, with each progressive month setting new heat records, the rhetoric of these reports never tires of stressing that “while the window of opportunity is closing fast,” it was not yet too late to change course. (The “yet” is doing a lot of work here.) The reason for this rhetoric is not difficult to guess: after all, if there were no hope left, why would we be collectively incentivized to change our behavior?⁵

⁴ Perhaps understandably, much of the early reflections on this question came from journalists, see among others Rebecca Solnit, “If you win the popular imagination you change the game’: Why we need new climate stories” *The Guardian*, January 12, 2023. The climate journalist David Wallace-Wells, who was primarily known for its alarmist *The Unhabitable Earth* (2017), made waves when he proclaimed a new optimism, see for instance his interview for *Rolling Stone*, March 12, 2019.

⁵ The eco-philosopher Timothy Morton has been trying a different tack in his short essay *All Art is Ecological*. His distinctly unsensational opening statement is “You may find yourself living in an age of mass extinction.” He argues that not knowing – reinserting the excluded middle between yes and no – is exactly where catastrophe lies, and that's what should drive our curiosity. Admittedly, that's a hard case to make to anyone who isn't paying constant close attention.

Music is typically a far cry from all these questions. As an art form with famously complicated modes of representation, it does not have the same flexible access to narrative strategies as films or novels. That is not to say that music cannot employ, and *successfully* employ, narratives. But what it means is that music typically operates more comfortably on an affective level. As it turns out, this can be a highly effective tool in the fight for the environment. I'll leave it to other commentators with the appropriate expertise to investigate the underlying psychological processes in more probing detail. But we can start by breaking down the main kinds of affective levels that have been used in the fight against climate change.

In other words, there is a certain activist element feeding this discussion, as is often the case in ecomusicological enterprises, engaging in research in hopes of bringing about the kind of change that goes beyond the halls of academia. But note how I was using the present perfect at the end of the previous paragraph. Musicology is not a predictive science. Its record of foreseeing the future and gauging its effects on listeners is poor. There is no guarantee that the right kind of music will, like the *meravigliosi effetti* (miraculous effects) the Renaissance sought to recuperate, bring about a more ecological behavior in the future. But what can do here is to examine some of things that have been attempted in the past, as well as those that have not yet been tried but might work, with the view to seeing similar projects employed in appropriate scenarios going forward.

This is not a complete list and, as is common in these ventures, there will be no shortage of subcategories and fine-tuned distinctions of the affective work music can perform that can be further introduced. What I am interested in are broad categories

that will help us think further about how music can be employed effectively in the service of slowing or defeating climate change. How can we use music to charm, to strengthen and to teach? How do we make the most judicious use of music's "three chords of might"?

To Charm

Theorists and aestheticians, going back at least to the age of Plato and Aristotle, typically juxtapose *diegesis* (narration) with *mimesis* (imitation)—broadly, as the act of telling as opposed to re-enacting. For music, certainly for untexted music, this fundamental distinction is much less clear-cut: its modes of story-telling often depend critically on creating sonic representations of events or objects that normally reside outside of music. To make matters more complicated, with the institutionally enshrined opinion that the best music is one that does not represent anything outside itself, the options became severely limited.

So it's perhaps not surprising that public awareness-raising initiatives and academic reflections, certainly during the early period of ecomusicology in the years leading up to the new millennium, focused their efforts on one work of western art music more than any other: Beethoven's Symphony no. 6, known as the "Pastoral." This was a time when, despite vigorous debates about the musical canon, the choice of academically permissible topics and musical objects was severely limited. In this context, the composer Beethoven and the genre of symphony, as a piece that was unquestionably about nature, were both unimpeachable choices; better yet, the Pastoral was even largely exempt from the taint of program music because the composer himself

had reassuringly specified that the symphony was more an “expression of sentiments than painting.”

Several ecomusicological studies from that time took on the task of investigating how exactly music was connected with nature, and Beethoven’s Pastoral was invariably given pride of place. What was different about the ecomusicological writings from the 1990s as compared with earlier works on Beethoven’s music and nature was that they largely avoided hagiography and instead contextualized and historicized.⁶ Yet, among them, the German musicologist Roland Schmenner felt that even this new approach did not go far enough: what those explanations and aestheticizing interpretations were distinctly lacking was disciplinary critique.

His own polemical monograph on the Pastoral, subtitled *Beethoven, thunderstorm and lightning rod*, was clearly out to shock, and to rattle at the foundations of the rapidly uplifting stories we tell ourselves about Beethoven and nature.

Schmenner pushed hard against the traditional genius myth, often by deflating cherished mythologies. Thus he argued that the movement titled “Scene by the brook” had traditionally been taken all too literally—with Beethoven sitting at a river bank letting nature’s inspiration dictate his compositional flow, as the unreliable amanuensis Anton Schindler asserted and Franz Hegi’s much-reproduced print of 1834 visualized in

Figure 1. Schmenner makes the case that this simply could not have taken place in this way: the majority of the sketches for the slow movement are dated February to April 1808, when it would have been far too cold in Austria to spend much time outside

⁶ A lot of this early literature was in German—and that’s no coincidence: apart from a rich musicological infrastructure, the Green party in Germany rose to political prominence relatively early, in the 1980s. Peter Schleuning’s *Die Sprache der Natur* (1998) and Helga de la Motte Haber’s *Musik und Natur* (2000) are good examples of this movement.

composing.⁷ The whole idea of Beethoven communing with nature is better understood as a cultural trope, an idealized image planted in the collective memory during the



Biedermeier period.⁸

A second bee in Schmenner's bonnet are the mealy-mouthed assurances that Beethoven's music should not be taken as word-painting, that is, as part of the aesthetically shunned, "bad" genre of program music, but rather as sentiments experienced in the presence of nature—in other words, a refined and acceptable form of representation.⁹ What musicology failed to do, however, was use this opportunity to

critically review the underlying aesthetic categories and the discipline's tacit (and not-so-tacit) biases.

Third and most consequentially, Schmenner used his discussion of Beethoven's Pastoral and nature as an opportunity to include discourse analyses of social and political issues—technological innovation and progress around 1800, the effects of incipient tourism, the harsh realities of farming life—that would otherwise fall outside of

⁷ Roland Schmenner, *Die Pastorale: Beethoven, das Gewitter und der Blitzableiter* (Kassel: Bärenreiter, 1998), 139. <https://drawingsandprints.com/CurrentExhibition/detail.cfm?ExhibitionID=27&Exhibition=30>

⁸ Biedermeier describes the period in Central Europe from the end of the Napoleonic wars in 1815 to the failed revolutions of 1848. This was a time of relative political stability marked by political repression and extensive censorship under the conservative Metternich regime. Biedermeier ("bieder" meaning plain, conservative, bourgeois, and "Meier" being a common last name denoting averageness) is well captured as the style of the bourgeoisie, emphasizing domesticity, interiority, pleasantness, moderation, seemliness, and a pointedly unpolitical outlook.

⁹ Schmenner, *Pastorale*, 43–51.

the *cordon sanitaire* that the discipline of musicology had traditionally drawn around its objects. Needless to say, his cultural provocations raised a lot of eyebrows at the time. Concepts like climate change or global warming were not yet in wide circulation; public ecological discussions at the time were dominated by *Waldsterben* (forest dieback) and the ozone hole. Nor did Schmenner believe that Beethoven's music had much to contribute to current ecological problems; if anything, he argued, it could be used to show that late-twentieth-century public discussions about nature were still bound up with the same uncritical pieties that had already marked bourgeois ideology during the Biedermeier era.¹⁰

Even today, a quarter-century later and some 1.12°C (2.12°F) hotter, the appeal of the symphony and, no less importantly, its creator has not lost any of its charm. The *Beethoven Pastoral Project* launched in 2017 in a UN-backed initiative, underwritten by two hundred and twenty-two musicians and institutions, to celebrate the composer's two hundred and fiftieth anniversary in 2020 with an ecological wake-up call.¹¹ Its website proclaims:

Beethoven loved nature. For him it was a place of relaxation, solitude and inspiration. His Sixth Symphony, the 'Pastoral,' musically depicts the harmonious unity between mankind and nature. Today, nature is under threat and mankind is on a course to destroy his environment and livelihood.¹²

The project itself is long on inspiration and short on details. António Guterres, Secretary General of the UN, explained the motivation of this project: "Some will be moved to act

¹⁰ Ibid., 264.

¹¹ The location of Bonn, a UN site and Beethoven's birthplace, is also an important factor here. It's no coincidence that two COP (Conference of the Parties) meetings, that is, the annual conventions of the governing body of the UNFCCC, in 1999 and 2001, had both taken place there. The Beethoven-Haus Bonn holds the autograph score of the Pastoral Symphony.

¹² <https://pastoralproject.org/project-information/>

by science, economics or human suffering. The Beethoven Pastoral Project, an initiative of artists and activists, will instead use the power of music and an iconic global genius to mobilize leaders and public alike.”¹³ It’s worth recalling that this happened at a time, in 2020, when the first Trump administration in the US had filed their formal withdrawal from the Paris climate agreement, during was the then-hottest year on record—to say nothing of the COVID-19 pandemic that was concurrently raging. The annual UN report that year ramped up the rhetoric considerably, issuing a red alert for the climate and calling the immediate future a “make-or-break year.”¹⁴ One gets a distinct sense from Gutteres’ rather non-committal endorsement of the project that the main benefits of the project was that its opportunity costs were low: the project can’t do any harm, and who knows, maybe it’ll help a little bit, somehow.

One can hardly fault the Secretary General of the UN or indeed the organizers of this project designed for the general public for not going deeper into the question of how exactly Beethoven’s music—or indeed, his professed love of nature—would induce individual and collective change in us. So what kind of climate story, then, was the Beethoven Pastoral project telling? The key term here was without a doubt inspiration. The question of inspiration is woven through the rhetoric at every turn, an inspiration that somehow flows from nature and now, in this dire situation, will in turn benefit nature. The piano arrangements of Beethoven’s Pastoral symphony that British pianist Paul Barton performed in the Thai jungle to an audience of elephants, as a prelude to the 2020 Beethoven Pastoral Project, may not immediately conjure up a solution to

¹³ Ibid.

¹⁴ https://unfccc.int/sites/default/files/resource/UNFCCC_Anual_Report_2020.pdf, 1.

climate change. But Barton has an answer: “It inspires us to find the strength that we need together to preserve our planet—not tomorrow, but now.”¹⁵

The power of the UN Beethoven Pastoral project is greatest if we don’t think about it too hard. It only works if we resolve not to apply analytical methods to squishy terms such as “nature,” or indeed “genius” and “creativity”—those latter two are never far away whenever Beethoven is invoked. Of course, genius and creativity are crucial when it comes to figuring out a way out of our desperate climate situation. Beethoven may not give any concrete advice, but if we look up to him we will surely figure out a way sooner or later. In reality, of course, the Pastoral is a McGuffin: the work itself is simply not that important. It serves primarily to give us license to create an imagined community across the world, in which acts like playing the piano in front of elephants become meaningful, and in which the presence of like-minded people all over the world gives us the assurance that together we can move mountains.¹⁶

It is all too easy to cynically condescend to such efforts in the name of Beethoven. The holes in the argument would be large enough to drive a truck through them. But then again, this project is not about making a philosophically sound proposition, but rather about getting people motivated. Given the enormity of our climate problems, we will need all the help we can get. In the end, all self-delusions aside, the inspiration that some people can find in Beethoven’s Pastoral and the global solidarity it can occasion, might not be such a bad thing after all.

¹⁵ <https://www.dw.com/en/beethovens-pastoral-artists-revisit-a-symbol-of-climate-protection/a-51117985>

¹⁶ At the outset of his book *Homo mimeticus: A New Theory of Imitation* (Leiden: Universiteit Leiden Press, 2023), Nidesh Lawtoo redefines mimesis, helpfully for our purposes, as a collective act that often serves educational purposes.

To Strengthen

As must have become quite clear by now, the central question for ecomusicology is not *how does music tell stories?* but rather: *how can we use music to tell environmental stories?* The precise nature of the music in question is often not important—this is not a time for aesthetic purity—as long as the message is pertinent. In other words, an environmental story can be told through the curation of a classical music concert,¹⁷ or in a concept album like the Appalachian Black metal band Panopticon’s concept album *Kentucky* (2012),¹⁸ or by means of a symbolic act like the British rock band Coldplay’s *Music of the Spheres* world tour (2021/22) who put several dozen exercise bikes on stage and encouraged audience members to help cutting the concert’s carbon footprint, at least a tiny bit.

One of the most prominent names in the ecological music movement is doubtless the Canadian soundscape artist R. Murray Schafer. Other chapters in this volume will deal more fully with this important figure and his work, so I will focus on just the aspects from one of his major works, the *Vancouver Soundscape* project (1973), that matter here for our specific purpose. Schafer’s concept of the soundscape, as many have pointed out, suffers from the irony that it laments technological progress while also crucially depending on its recording media. And yet, it is the threat of the disappearance of the sonic environment, with its sound signals, characteristic keynotes, and unique soundmarks, that motivates Schafer’s soundscape and lends it its specific aesthetic

¹⁷ Recent examples that I am aware of include Boston’s Isabella Stewart Gardner museum and the NDR Oldenburg Symphony Orchestra.

¹⁸ Olivia Lucas, “Kentucky: Sound, Environment History – Black Metal and Appalachian Coal Culture,” in *Modern Heavy Metal: Markets, Practices and Cultures*, ed. Toni-Matti Karjalainen and Kimi Kärki (Helsinki: Aalto University, 2015).

appeal, located halfway-between documentation and composition. The *Vancouver Soundscape* is a project and an album based on site-specific recordings in and around the city of Vancouver recorded in 1972 and 1973, including sound collages of the Pacific Ocean and Vancouver Harbour, as well as the urban noises made by its denizens. And yet, the recordings are only one part of the project; it is also a meticulous mapping-out of where what kinds of sounds were recorded, even what sounds ear-witnesses recall from past times, to pin them down to specific locations and document them in as many dimensions as possible. All this is carried by a sense of urgency that these sounds must be preserved for posterity—what the cultural theorist Roland Barthes once called the *futur antérieur* (future perfect)—because one day they *will have been*.¹⁹ The soundscape anticipates their future loss. In bringing these sounds close to us, in underlining how precious they are, it gives us a reason to care about and for them: to imagine a world in which these sounds no longer exist, a soundworld that we might no longer recognize, and to preserve it for generations that come after us and that we don't even know.

It would be relatively straightforward to cast this aesthetic in a nostalgic light, and specifically the kind of future nostalgia that Svetlana Boym (2001) explored so poetically, as “a sentiment of loss and displacement, but also a romance with one's fantasy,”²⁰ that is, as a longing for a place that we never knew in the first place and that may only have existed in our imagination. But I want to turn this discussion in a slightly different direction, toward what eco-philosopher Timothy Morton calls *data-ness*.

¹⁹ Roland Barthes, *Camera Lucida* (New York: Hill and Wang, 1981).

²⁰ Svetlana Boym, *The Future of Nostalgia* (New York: Basic Books, 2001), xiii.

Morton's broader project, which he lays out in a number of books, is to retool aesthetics for the Anthropocene.

The formula that Morton develops for his environmental aesthetics can be summarized as “plus intimacy, minus selfhood.”²¹ It is important to ensure a strong sense of attraction to and from the object, to allow it to enchant us, draw us in—and us, in turn, allowing ourselves to be enchanted and drawn in—and create an emotional bond. It's important, in other words, to *care* for it, in every sense of this verb. This is the “intimacy” part of the equation. And at the same time, this should happen, not with the view of expanding our own sense of selfhood and subjectivity, as in traditional aesthetics, but by deliberately bypassing these mechanisms. This is not about *us*, but it's about the radical care of the *other*, whatever this other may be. Morton is explicitly open to the idea that this can mean caring for nonhumans or lifeless objects.²² Ecological consciousness, after all, requires a thinking that goes beyond the self and embraces the unknown collective, whether it be other (non-human) species or future unborn generations.

Building on the term “truthiness” (originally introduced by the twenty-first-century comedian-cum-public-philosopher Stephen Colbert), as something that *feels* true, whether or not it's actually supported by facts, Morton suggests that ecological art has *data-ness*, the experiential quality that the listener is apprehending something, which engenders an aesthetic sense of “solidarity with what is given.”²³ And data, Morton

²¹ Timothy Morton developed the foundations of environmental philosophy in three books: *Ecology without Nature* (Cambridge, MA: Harvard University Press, 2009), *The Ecological Thought* (Cambridge, MA: Harvard University Press, 2012), and *Hyperobjects: Philosophy and Ecology after the End of Nature* (Minneapolis: University of Minnesota Press, 2013).

²² Morton also counts as a major figure in the philosophical movement known as Object-Oriented Ontology, or OOO (“triple-O”), which is of obvious relevance here.

²³ Morton, *All Art is Ecological* (London: Penguin, 2020), 58.

reminds us, is nothing other than the Latin for “given things.” What we experience, he rephrases in rather Heideggerian language, is merely the givenness of data.²⁴ And importantly, it is not necessary for such art to have an explicit ecological dimension; art, Morton explains, is always-already about solidarity with nonhumans, even and especially if it does not have any particular agenda, and that’s precisely what makes it ecological.

With this in mind, we can return to Schafer’s *Vancouver Soundscape*. Its data-ness specifically rests in the ambiguous position of the soundscape, lodged part-way between documentation and composition.²⁵ (And perhaps it’s more than just a punny coincidence, in this context of *data-ness*, that *noise* pollution is Schafer’s *bête noire*.) In this sense, the maps and visualizations of sounds are not merely supplementary to the field recordings—or rather, they are “supplementary” in the specific deconstructive sense of Derrida’s coinage, in that they are deceptively indispensable. It is specifically here that listeners are urged to *care*—to be drawn toward, to worry, to preserve and protect, and ultimately to allow the sounds to get close enough to establish an intimate relationship. The better we know these sounds, the more deeply we understand and document them, even at a time when we cannot experience ourselves, the better we can pass them on, to our children’s children, in solidarity with unknown and unborn future generations. This is the formula of intimacy-without-selfhood that Morton envisions in his ecological aesthetics.

²⁴ Morton graces this sensation with the neologism *thinkfeel* or *truthfeel* (after *mouthfeel*), *ibid.* 61.

²⁵ Lest I inadvertently convey the sense that this “data-ness” is in any way objective, it’s worth bearing in mind that Schafer’s landscape conveys specifically a settler-colonial notion of Canada, as Dylan Robinson underlines in a withering critique at the outset of his *Hungry Listening* (Minneapolis: University of Minnesota Press, 2019).

How exactly does this maneuver cause music “to strengthen,” as Longfellow’s poem lists as its second quality? A lot boils down to the old adage that you never know what you have until it’s gone. In documenting and aestheticizing soundscapes, however, the sense of nostalgia is turned to the future and may prepare and steel its listeners for things to come, and provide the moral fortitude that climate change demands.—Or so one fervently hopes.

To Teach.

In the summer of 2022 climate change protests turned on artworks. In a number of high-publicity events, from Paris to Potsdam and from Madrid to Milan, climate protesters smuggled liquids—tomato soup to resemble blood, a black viscous liquid that looked like oil—into museums and splattered them on celebrated paintings.²⁶ Following their attacks they would typically superglue one hand to the wall and record their actions with a climate message that would then be posted on social media. These theatrical protests happened primarily in European museums; in all cases the artwork was safe, protected by glass, so that the destructive act was entirely symbolic.²⁷ Commentators have compared these protest actions with performance art. Nonetheless, the mere thought

²⁶ When I researched this section, in the Fall of 2022, I was based in Berlin. This is why my examples and references are predominantly from the German media. This may, however, not be a bad thing: other than the UK, where the public debate—under a far-right populist government, during the three-prime-minister-year that cycled through Boris Johnson, Liz Truss, and Rishi Sunak in rapid succession—was especially heated, Germany was a prime center of these protests.

²⁷ It’s perhaps not surprising that the majority of protests happened in Europe: starting in 2018, the Swedish teenager Greta Thunberg had led weekly climate protests, known as “Fridays for Future,” which were eagerly taken up by high schoolers and others around Europe. At its peak, on September 20, 2019, these weekly events involved a staggering 4 million protesters. This wave of enthusiasm rapidly ground to a halt because of the beginning COVID-19 crisis. After emerging from the crisis and its lockdowns, the teenagers were frustrated to see that governments had not followed through with climate measures. It was at this stage that more drastic measures, like museum climate protests, became more widely discussed in organized climate groups such as *Just Stop Oil* and *Extinction Rebellion* in the UK, or *Ende Gelände* and *Letzte Generation* in Germany.

that these priceless works of art could be exposed to such dangers sent shockwaves through the general public. The message behind this protest was not difficult to ascertain: You're upset about seeing a unique and irreplaceable object of beauty destroyed? Good. You should be. Because this is exactly what we are doing to our planet every day.—These kinds of attacks on art point an accusing finger at the rest of us from which it is difficult to hide.

As an African American friend pointed out at the time, this is a very white kind of protest. That's true, and it's a very bourgeois kind of protest as well. This is by design: it's a protest against precisely the societal forces that have historically benefited the most from fossil fuels and are best placed to effect change. It's noticeable that the targeted paintings were invariably popular classics at the heart of the art canon, by such artists as Van Gogh, Monet, or Klimt. In the property-plus-education equation that has traditionally defined the (white, upper) middle classes, the symbolic protest hits where it hurts.

The response to the shock therapy that the museum protests elicited was one of near universal rejection. The museum and media world, who, to be sure, predominantly represented the white educated urban middle class that the protests were targeting, refused to even engage with the climate message that the protesters were hoping to foreground. They dismissed the protests as publicity stunts. In their response, an open letter, the museums charged that protests of this kind were fundamentally misguided: museums were friends of the climate movement, they argued, because their task, too, was to protect and preserve.²⁸ The media, meanwhile, took the most strident tone in

²⁸ <https://icom-deutschland.de/de/nachrichten/564-statement-attacks-on-artworks-in-museums.html> (This statement has since been removed from the website.)

their criticisms: dismissing the protest as publicity stunts and hurling epithets such as “terrorists,” “fascists,” “Maoists,” “Taliban,” or “Bolsheviks” at the protesters, their verbal abuse became so disproportionate that some historians and politicians felt moved to step up to admonish the media for their irresponsible extreme rhetoric.²⁹ In one way, the protesters had succeeded: shocking public acts of this kind are primarily aimed at creating headlines, though they weren’t exactly the kinds of headlines they had been hoping for. And in one regard the strident media critics were correct: these theatrical art attacks were *of course* publicity stunts. They were borne of a distinct teaching mission, trying to raise awareness among a general public that might otherwise be lulled into a sense of indifference.

The Swedish ecologist and climate activist Andreas Malm, whose manifesto *How to Blow Up a Pipeline* (2021) called for civil disobedience and advocated an ethically motivated climate terrorism, was one of the rare voices who defended the protesters’ motivation to a broader readership. The critics are right, Malm conceded, that the protests are shocking and dramatic. But there must be space, he went on to argue, for both goal-directed purposive disruption and shocking, attention-grabbing activism.³⁰ There is no time to lose, Malm explained: apathy and wait-and-see are not neutral positions, but will contribute actively to our careening toward the end of the world. “Business as usual” is simply not an option—and the young protesters, whose chosen

²⁹ See for instance Michael Köhler on Deutschlandfunk radio, October 30, 2022, or Maria Ossowski on RBB Kultur on October 24, 2022. The political scientist Rebecca Pates made a point, in an interview on Deutschlandfunk on October 30, 2022, of describing the climate protesters as *ur-demokratisch*.

³⁰ Andreas Malm, *How to Blow Up a Pipeline* (London: Verso, 2021) und “History May Absolve the Soup Throwers” in *New York Times*, October 20, 2022.

name is not for nothing “Last Generation,” are very aware that this is a matter of life and death.

Attempts to disrupt bourgeois institutions in the classical music sphere with similar shock protests were thwarted by music’s intangible materiality: it’s simply not as straightforward to spray string quartets or symphonies with tomato juice, which leads us back to the old chestnut that sits at the heart of the discipline of musicology: where exactly does the musical object reside? On November 23, 2023, climate protesters attempted to disrupt a concert with internationally acclaimed violinist Julia Fischer in Hamburg’s Elbphilharmonie concert hall: two protesters glued themselves to the metal railing surrounding the conductor’s podium just before the start of the music. They had, however, not done their homework: the railing is not attached, it simply slots in and out of size-matched holes in the wooden podium and is held in place simply by gravity. Thus the protesters could swiftly be removed by stage hands along with the railing, accompanied by the jeers and cheers of the audience, and the concert continued after minimal disruption. Thankfully, the concert organizers and the soloist issued statements the next day declaring their solidarity with the aims of the climate protesters in no uncertain terms. Julia Fischer, the violinist, explained in an interview the next day:

First of all, the global community clearly is not succeeding in countering the biggest crisis of humanity, the climate crisis, with collective action. This is what we should be talking about, and not about young people, gorilla glue, and the railing behind the conductor’s podium. Second, a concert hall can surely be a location for political exchange.³¹

³¹ Viola Dengler, “Nach Klima-Protest in der Elphi: Solistin und Veranstalter mit klarer Ansage” *Hamburger Morgenpost* 28. 11. 2022. I am grateful to Lester Zhuqing Hu for pointing me to this news item.

Fischer is exactly right. The central question that the museum managers failed to confront in their claim that museums are spaces of protection and preservation is this: If the world is about to end, what exactly are they preserving, and for whom?

Shock is a tricky concept in protests: the extremity of the emotion can easily elicit an opposite reaction. Rather than spurring onlookers to action—that is, raise awareness, and *teach* them to change their behavior—the vehemence of the shock can lead to a refusal to engage and cooperate. To focus on just one alternative example of how shock can be channeled into a genuine teaching moment, take the Scottish conceptual artist Katie Paterson who opted for a somewhat more moderate version of the irreplaceable loss that was at the heart of the museum protests in her soundwork *Langjökull, Snæfellsjökull, Solheimajökull* (2007).³² The gargling, cracking and hissing noises of glaciers have long held environmental artists captive (and are discussed further in **CHAPTER XXX** of this volume). For this piece, Paterson recorded the sounds of the eponymous three Icelandic glaciers calving, pressed them onto phonograph records made of ice from the respective glaciers. The three icy LPs are played on a turntable, and the glacier sounds are heard one final time as the ice melts away and the recorded sound irrevocably disappears.³³

This sound piece pivots on the interaction between the evanescent sound material and the recording technology. To fully appreciate this point we do well to delve a little deeper into some of the basics of media theory. As Sybille Krämer has explained, the core of Friedrich Kittler's influential media theory consists in a cultural technique he

³² I have written more extensively about this piece in "Glacial Music," *Array* 43 (2023): 8–13.

³³ Admittedly, one shred of evidence survives: a video recording exists documenting the unique performance.

called “Time Axis Manipulation” (TAM).³⁴ All technological media, down to the most fundamental of them all—writing—enable a form of TAM. Perhaps the most important aspect that Krämer’s interpretation highlights is that the act of inscription allows repeated access in a way that unmediated communication, which is subject to the irreversible flow of time, does not. In other words, media spatialize the temporal aspect of communication, and expose it in this way to new forms of manipulation: a written text can be repeated and studied at length, and not only in real time; a sound recording can be accelerated or decelerated, for instance, playing a record at 78rpm instead of 33 1/3rpm on a turntable; or a tape can be played in reverse (think of the fad in the 1970s where embedded subliminal messages could be revealed when playing the recording backwards). All these are forms in which the flow of time can be manipulated.

This idea of time axis manipulation as defined by Krämer, when brought to bear on Paterson, offers a poignant framework for *Langjökull*, *Snæfellsjökull*, *Solheimajökull*. If the reproducibility that lies at the core of TAM is also at the heart of the (stated or implicit) preservationist goal of environmental glacier sound recordings—not dissimilar to what we saw in Schafer’s work in the previous section—then Paterson’s performance piece turns this feature on its head. The no-longer-eternal ice of the glacier here provides not only the sound materials but also the recording materials. The sounds are thus doubly fragile. And in this situation, reproducing a recorded sound on a melting medium is not a repeatable act, but becomes a singular event. In being replayed, the sound, like Eurydice in the Orpheus myth, dies a second death, this time more definitive, with no further hope of being recovered. The tragedy of the ecological

³⁴ Sybille Krämer, “The Cultural Techniques of Time Axis Manipulation: On Friedrich Kittler’s Conception of Media,” in *Theory, Culture & Society* 23, no. 7–8 (2006): 93–109.

catastrophe is captured in this overdetermined aural death; the recording that melts, in real time, before our ears and eyes, hammers the final nail in the coffin of the glacier's expiration.

To use the language of traditional aesthetics, *Langjökull*, *Snæfellsjökull*, *Solheimajökull* makes available to the senses the processes of global warming to which we can normally only gain access through our faculty of reason—if at all. The hope to which we typically cling, that we might preserve something, anything, for the future, melts away with the last sounds of the Icelandic glaciers. The overdetermined artwork makes the tragedy of loss almost too direct—but what saves it from becoming too melodramatic is that it operates deictically rather than through drastic action; it teaches by *showing* rather than *telling*. It remains at a level of pointing at what we stand to lose, with the disappearing sound standing in metonymically for the entirety of the glacier, for environmental collapse, leaving the viewer and listener to fill in the links for themselves.

Conclusion

Longfellow ends his poem “The Singers” by reassuring the reader that all three musical objectives—to charm, to strengthen, and to teach—are of equal value, and not in discord with one another. The emotional responses covered here—inspiration, nostalgia, shock—cover just some examples of the whole range that music is able to instill in its listeners and that can be put to the service of thinking and acting ecologically.

Music has some important climate stories to tell, even if they don't always follow in the modes of story-telling that program music has suggested as the norm for musical

narrations. This stands to reason—after all, the stories that music has to tell about climate change don't typically have straightforward narrative arcs. The end is still very much open and, more worryingly, in dispute.

But perhaps more importantly, music in this context is not one thing. The preceding three sections lumped together, deliberately so, a wide range of different sound objects. The primary connection between them was the bare fact that their uses were all in some way related to climate change. Perhaps the most the far-reaching thing that ecomusicology can do is to open up our ears to the full range of possibilities that music can be and alert us to the many different uses that it has been put to. At this stage it is no longer radical to claim, with Christopher Small's landmark *Musicking*, that music is not a thing but something one *does*. It's a practice, a behavior, an attitude.

Nor is the list complete – not that it ever could be. To adapt Morton's bon mot, *All Music Is Ecological*. One of the important points in the context of climate change is that the composer's intention does not matter one bit. Music written explicitly with the view to global warming, from Michael Jackson's *Earth Song* (1995) to John Luther Adams' *Vespers to the Blessed Earth* (2021), can be just important and just as effective as music that is adopted and adapted for this purpose—think of universal protest songs like “We shall overcome” or John Cage's work *ORGAN²/ASLSP (As Slow As Possible)* (1987), which in the context of the six-hundred-thirty-nine-year performance that is taking place in Halberstadt has been taken as a long-termist symbol of human survival in the face of looming climate disaster.³⁵ From the perspective of climate stories, the

³⁵ The philosophical movement of Longtermism, primarily represented by William MacAskill and Toby Ord, and endorsed by such figures as Elon Musk and Sam Bankman-Fried, has come under criticism for its neo-liberal tendencies (e.g. seeking market-driven solutions, prioritizing efficiency). This is not a

difference between these kinds of music is immaterial because in all cases, the purpose of the music is to set us on a course, to lend cognitive and emotional support, for a thought process that will help us come to terms with our situation in a rapidly changing climate. By itself, music offers no solutions. But it can, or so one hopes, help us find them.

necessary corollary of long-term thinking. Roman Khraric's *The Good Ancestor* (New York: The Experiment, 2020), for instance, lays out an intergenerational vision that may serve as an alternative.