Composition — Research Paper

Royal Conservatory of The Hague

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Sonic Placemaking:

(Re)Creating Place as a Comprehensive Compositional Practice

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Abstract

This paper is focused on the development of a large-scale personal compositional practice centered around the concept of placemaking. Its content is focused on the relationship between data analysis, data sonification, and musical structure in the development of art which engages in a practice which I refer to as “sonic placemaking.” In the end, this research intends to put this artistic practice in a space to interrogate the relationship between art and social change, both on small and large scales. The different sections of the paper will provide context and support for my practice's conceptual and philosophical background, drawing on related theoretical writings in geography, sociology, fine art, and composition while guiding the reader through my process in executing these concepts through works of multimedia art and acoustic composition — and, at the same time, actively questioning the ability of this process to influence social change and worldmaking.

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Finally, this research is dedicated to my late grandfather, Bob Bradley. I may not always believe in myself, but his belief in me never wavered, and I carry that with me every day.

Preface

This paper is concerned with the implication of interacting with placemaking within an artistic practice, and specifically its impact when integrated as the basis of a comprehensive compositional process. It will establish a philosophical basis for the concept of “sonic placemaking” — informed by both geographical and anthropological theorists and multidisciplinary artists alike — which will lay a framework for the intertwining of placemaking and soundmaking in acoustic, electronic, and multimedia artworks. This framework and its practical and conceptual applications will then be explored in-depth by way of four case studies of my own music-making.

I am a composer and improviser engaging in acoustic, electronic, and multidisciplinary forms of soundmaking, but most importantly I am a collaborator. The music discussed in this paper is first and foremost concerned with the ways in which individual composition practice can become a collaborative effort to engage in making place. The compositional process which I outline relies significantly on inclusion and partnership in the creative process, and the normative hierarchy which separates “composers'' and “performers” is challenged at every opportunity; each of the pieces which I use as examples in this paper engage, in their own ways, in soundmaking as a process which is incomplete without some level of creative inclusivity which tests these roles.

A chair is still a chair
Even when there's no one sitting there
But a chair is not a house,
and a house is not a home
When there's no one there to hold you tight,
And no one there you can kiss goodnight

- "A House is Not a Home," Burt Bacharach and Hal David
-

Introduction

In August 2021, the week before I moved to The Hague to begin this master's degree program, I spent a week in rural Kentucky as part of a residency with New York City-based ensemble Longleash. We spent this week developing, rehearsing, and recording a new work together,[1] but this week also left me a significant amount of time to explore the place we were staying. This residency was hosted at the Loretto Motherhouse, a spiritual center for the Sisters of Loretto,[2] tucked away in a very small central-Kentucky community with a long-standing interest in hosting artist residencies — making curious, wandering musicians not that unexpected even on a property otherwise populated solely by nuns. The property has been in use since 1796 and still has buildings in use from as early as 1816. This, of course, means that not all of the property is optimal for modern use, with a handful of buildings maintained only for the purpose of historical preservation, including one building that houses a coal pit. One of the Sisters of the community noted to me that the coal pit hadn't been in use since the 1950s, at which point the community was connected to the regional power grid and gradually did not have to rely on coal for its energy needs; but even still, the pit remained almost full, a bridge between the modern and the antiquated — and, as the same Sister noted, always ready to be relied on once again in the event of major power outages during winter.

[1] This became the piano trio *fractures with grain, dust on the window-sill*, developed thanks to Pala Garcia, John Popham, and Vicky Chow.
[2] The Sisters of Loretto is a Catholic congregation with roots going back to the early days of the United States.

Shortly after I discovered the coal pit and learned more about it, I was walking on the property making field recordings with a handheld Zoom recorder. Displeased with the experience, I switched from the recorder's built-in microphone to the only other microphone I had: A small telephone pickup microphone, to be used as a cheap, low-power electromagnetic field microphone. Coal actually emits electromagnetic radiation,[3] and though it certainly does not do so at the strength to be picked up by such a small electromagnetic coil as the one I was using, I said *What's to lose?* and left the device in the coal pit for a short recording session.

This recording did not teach me anything about coal — I seriously doubt that its presence had any impact on the recording whatsoever, much as I would have wanted it to. However, its placement told me everything about the place itself. This recording taken in a static, seemingly silent environment was in fact full of energy and change. The power grid hummed constantly: Passing cars outside brought huge bursts of interference; workers and community members going by with cell phones brought slow, gradual change. In a place where modernity had passed by with time, the world remained in quiet, constant motion just outside, the past and future deeply intertwined. Each sound raised questions that could not easily be answered: What was its source? Who or what was responsible?

This is just one field recording in a whole universe full of them and full of places, but that's somewhat the point. An unused coal pit was revealed as the hotbed of activity it always was, a living relic — with an emphasis on *living*. In this recording, place is heard and felt, not just seen, as the world vibrates, hums, and crackles in ways that we find only when we're willing to search.

[3] Yang Yang et al., "Transient Electromagnetic Characteristics of Coal Seams Intruded by Magmatic Rocks," *PLOS ONE* 17, no. 2 (2022), https://doi.org/10.1371/journal.pone.0263293.

I.
Placemaking activity as artistic practice
Defining space and place

In recent years, my personal artistic practice has become heavily focused on what I consider "sonic placemaking." In the worlds of sociology and urban design, placemaking refers to the participatory act of shaping a public space in order to best serve the people it hosts.[4] However, this act can also extend into artistic creation for the same purpose, turning placemaking into a process in which one can interact with and reimagine places through music. Within the concept of placemaking and considering place, it's important to remember that the world around us is reinvented daily, our existence constantly in a state of disintegration, decay, renewal, and formation. We are left behind faster than we can accept it, moving towards a future that remains intangible even as we rocket towards it. Our pasts are left behind and what was once so tangible to us degrades away and becomes fiction. How do we as artists reconnect with this past and understand this future, the things which we hold so close to us even when we physically cannot? Graham Harman's thoughts on the "fiction" that we create out of our life experiences push back against the idea that lacking this tangible connection is a hindrance:

> ...we should be in no hurry to flush fictional objects out of existence…And remember that by 'fictional' I do not just mean the likes of Sherlock Holmes and Emma Woodhouse, but also the everyday houses and hammers that we seem to encounter directly, but which we perceive in the manner of simplified models of the real houses and hammers to which we can never gain direct access.[5]

Embracing the fictional becomes a pivotal way in which we can create meaningful connections with place — not just choosing to represent the world that does exist, but instead looking for the world that *did* exist and *will* exist.

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[4] "What Is Placemaking?," Project for Public Spaces, https://www.pps.org/article/what-is-placemaking.
[5] Graham Harman, *Object-Oriented Ontology: a New Theory of Everything* (London: Pelican, an imprint of Penguin Books, 2018), 30.

This leads to what is, for me, a pivotal question of interacting with place. Can the essence of something only be found through its direct translation into a medium? Or, can the essence of something instead be found in a way that prioritizes its *use and contribution* to the translation? Harman's concept of object-oriented ontology provides a philosophical basis for a manner of *indirect* artistic interaction having value over literal recreation:

> …any literal description, literal perception, or literal causal interaction with the thing does not give us that thing directly, but only a translation of it…an indirect or oblique means of access to reality is in some ways a wiser mode of access than any amount of literal information about it.[6]

The main crux of my approach focuses on the idea that allowing indirect translations of places (e.g. field recordings, photos, or videos of an object taken in a specific place and time) to actively be re-contextualized within artistic creation and performance (e.g. being used as the formal structure for a piece, turned into musical notation, projected on or into the instruments —either visually or audibly) provides for a significant, socially meaningful interaction with the place itself.

Composer and researcher François Bonnet's research on the ability of sound to retain histories and backgrounds relates to this as well. In speaking of the concept of "soundmarks" (acoustic marks representing a given territory), he notes that "Each sound…once it becomes audible (once it leaves a trace) and forms a territory (makes a mark) can become the soundmark of a more or less virtual. more or less sensible territory."[7] Allowing an object, a soundmark of a place — something statically fixed or caught in time — to play an active role in artistic creation (and, especially, performance) essentially turns it from a "dead" object into a "living" one, one which does not only shape the creation but is also shaped *by* it.

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[6] Graham Harman, *Object-Oriented Ontology: a New Theory of Everything*, 36.
[7] François Bonnet, 'Area and Metamorphoses,' in *The Order of Sounds: A Sonorous Archipelago*, 58.

Placemaking is a collaborative process and I propose that incorporating it into artistic practice provides a blueprint in which one can explore personal connections, provide an amplifying platform for diverse outside voices, and work to reimagine a shared future for the community at large. This relies on one embracing the belief that art can help to enact change — or, at the very least, seriously influence our views on the future. As music theorist Judith Lochhead notes, "While it may be true, as Luciano Berio points out, that 'music can't lower the cost of bread, is incapable of stopping…wars, [and] cannot eradicate the slums and injustice,' the affective powers of music as sensuous presence can spur imaginings of new futures."[8] The difficult part in this process is then not the conceptual level, but the translation of the concept from its tangible form to the intangible art world. Urban designers know how to build a place because it is a literal thing — a courtyard, a garden, a library — but what about an artist? Beyond only dealing with *literal* place, with my work I aim to tackle how musical placemaking exists as a way to reimagine our connections to the intangible — our past and our potential futures as individuals and as a larger society.

I must admit that figuring out *what* place actually is can offer an immediate roadblock, and defining the concept of place itself becomes the key element for setting a blueprint for this artistic practice. Aristotle's concept of place[9] — the belief that the place of *x* is the first innermost motionless boundary of the thing that contains *x* — is a logical starting point for many, but handles a concept that relies too much on physicality for the interest of my philosophy. Finding a definition for my practice begins with differentiating it from a space, geographic location, or simply physical existence, something which geographer Tim Cresswell points out is "a more abstract concept than place…Spaces have areas and volumes. Places have space between them." As *space* may be used to represent the geographical location, *place* then becomes what defines a particular location:

[8] Judith Lochhead, *Music Now: Sonic Imaginings of New Futures* (unpublished, provided by author).
[9] Review by Mohan Matthen, "On Location: Aristotle's Concept of Place," Notre Dame Philosophical Reviews, November 29, 2018, https://ndpr.nd.edu/reviews/on-location-aristotle-s-concept-of-place/.

> The word place is often used in everyday language to simply refer to location. When we use place as a verb for instance (where should I place this?) we are usually referring to some notion of location-the simple notion of 'where'. But places are not always stationary. A ship, for instance, may become a special kind of place for people who share it on a long voyage, even though its location is constantly changing….As well as being located and having a material visual form, places must have some relationship to humans and the human capacity to produce and consume meaning.[10]

As Cresswell further observes, space is perhaps that which needs to be contextualized along the way to creating a place:

> Space, then, has been seen in distinction to place as a realm without meanings as a 'fact of life' which, like time, produces the basic coordinates for human life. When humans invest meaning in a portion of space and then become attached to it in some way (naming is one such way) it becomes a place.[11]

This *sense of place*, and its flexible manner of being, is a major component of what I aim to connect to with my compositional practice. However, mere reference to, or surface connection with, a place is not quite enough; rather, I have preferred to elevate the importance of *objects* which make up our places, or even create them for us. These objects are things that can define a place and serve as more of a link between the abstract elements of a place and elements which can drive its transformation into a work of art.

François Bonnet's use of the conceptualized sonorous *trace* offers a possible connection between a place's objects and the role of sound in a place — asserting that the impact a sound has on a place in many ways defines the sound. As noted by Peter Szendy, "Even before materializing or becoming a signal, the sonorous — sound — in order to be, must *leave a trace*'... For 'to leave a trace', as the otographer tells us, to be a trace, is already for a sound to be 'somewhat more than a

[10] Tim Cresswell, "Defining Place," in *Place: An Introduction* (Chichester, West Sussex: John Wiley & Sons, 2015), 7.
[11] Cresswell, "Defining Place," 13.

sound.'"[12] Bonnet's conceptualization of this asserts that a sound in a place has a goal, an impact with which it can establish the guidelines of a place:

> …sound is not simply that which we hear; as soon as it exists, as soon as it leaves a trace, it is already somewhat more than that. It has functions to perform, expectations to meet, things to say. In fact, the utilitarian reinvestment of the sonorous is always already in play as soon as its tracing comes into effect. The trace of sound, neither purely sensible nor solely signifying, is where the sonorous opens onto the audible world, the great matrix of interfacing between sounds and listeners.[13]

Can the impact of a sound then bring its meaning to a space and transform it into place? The use of a space is a placemaking action, like how the use of a public park over time transforms its intended use into its real existence. Bringing sound from one *place* into another *space* then could leave the mark of one onto the other. For example, playing a field recording from *x* place into *y* place creates a new amalgam where one could have a hybrid forest-concert hall or courtyard-studio. Each combination changes the space in a way that is difficult to define but is all the same irrevocable:

> All over the world people are engaged in place-making activities. Homeowners redecorate, build additions, manicure the lawn. Neighborhood organizations put pressure on people to tidy their yards; city governments legislate for new public buildings to express the spirit of particular places. Nations project themselves to the rest of the world through postage stamps, money, parliament buildings, national stadia, tourist brochures, etc. Within nation-states oppressed groups attempt to assert their own identities. Just as the new student climbs on the bed to put the poster on the wall, so the Kosovan Muslim flies a new flag, erects a new monument and redraws the map. Graffiti artists write their tags in flowing script on the walls of the city. This is their place too.[14]

Does the graffiti artist tagging the wall, claiming their place, not define — or even redefine — what that place is? My practice is focused on the hope that yes, my sonic graffiti defines my places, legitimizes them, and changes them all at the same time: The sounds I offer are traces that impact these places; the manipulation of objects through sonic means validates their connection to places; and in doing so, these processes open up space for collaborators and audiences to make personal

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[12] Peter Szendy, preface to *The Order of Sounds: A Sonorous Archipelago* (London: Urbanomic Media Ltd, 2016), xii.
[13] François J. Bonnet and Robin Mackay, *The Order of Sounds: A Sonorous Archipelago* (London: Urbanomic Media Ltd, 2016), 8.
[14] Cresswell, "Defining Place," 10-11.

connections to the artwork. As artist Ronald Ophuis considers, this redefinition of experience is a crucial element of how we experience the world, and not just how we experience it through art:

> We attempt to create an image of the events we weren't a part of…You could say we dishonour the truth, that we're lying. But it's not the truth we're talking about, it's the experience, the feeling that comes with it. If you watch the crucifixion of Christ in any Catholic church, you know it's not Christ you're looking at but a body double and still you believe in his suffering.[15]

When we step outside of the world of sound for sound's sake, the transformative power of sound in the reimagining of a better future becomes immediately more real. Sound has historically been a means by which the oppressed have been able to redefine existence and 'the self' on their terms. As writer and researcher Jayna Brown notes in her book *Black Utopias: Speculative Life and the Music of Other Worlds,* sound has long been a guiding factor for Black artists, philosophers, and mystics in the United States engaging in placemaking within their communities. Sound served as a pivotal element in the spiritualism of figures such as Sojourner Truth and Rebecca Cox Jackson as they reframed and reimagined their existence within the cruelty of the reality of being free Black women in the United States of the 1800s. For example, as Brown notes, Jackson's focus on dreams and their deeply sensual nature full of sound and touch served as a monumental element of this placemaking process:

> Jackson's residence in the surreal, often dystopian landscapes of her dreams charts with precision the cruel touch of black existence and the phenomenon of black survival. Jackson chose to exist in her surreal interior world…Jackson grounded her sense of self and subjectivity in her power and ability to move and to act, between worlds, with her spiritual self as real and effective as her bodily one.[16]

This placemaking through sound continued with musicians in the Black community in the United States in the 1960s and 1970s as they dealt with the realities of segregation and a new paradigm stuck between societal progress and continued struggle. For artists such as Alice Coltrane and Sun

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[15] Ronald Ophuis, "Ronald Ophuis: Fiction Is Part of Witnessing," Being Here, http://www.being-here.net/page/1413/ronald-ophuis--fiction-is-part-of-witnessing.
[16] Jayna Brown, *Black Utopias: Speculative Life and the Music of Other Worlds* (Durham: Duke University Press, 2021), 57.

Ra, sound was once again a way in which humanity could transcend the cruelty of existence and build spaces of change:

> To practice sound was to exist in a sense of time without normative breaks. Existence is not the result of an antagonistic dialectic, but of flows and vibrations. It is continuous and ceaseless change.[17]

I mention these examples specifically because they provide the space to understand that sonic placemaking in differing forms has had a real-life impact for hundreds of years — both in an active and passive sense — displaying that placemaking as a foundational element of artistic practice has a very tangible effect on the world at large.

[17] Brown, *Black Utopias: Speculative Life and the Music of Other Worlds,* 70.

II.
Sound gathering, sonic extraction, and "depiction"

A major part of my practice of sonic placemaking is considering how sound is gathered, generated, or otherwise relates to the place that is being interacted with. In my work, this has often revolved around methods of field recording — like my aforementioned work with the electromagnetic microphones, spectral analysis, and other means of technological diffusion and interaction. When dealing with sound in this context, my process asks the question: *What represents the place sonically*?

The answer to this question lies in materials that prod listeners to recreate, reimagine, and restructure their view of a place, which has pushed me toward gathering material that is less immediately able to be connected to specific places, yet is intrinsically representative of a place all the same. A standard audio recording of a city street can offer some immediate, if limited, context to a place, but a contact mic recording of a manhole cover on the street offers an intimate perspective that raises different questions from a listener about the same place.

The work of German sound artist Christina Kubisch is an obvious starting point when considering (and reconsidering) how we listen to places and question them (especially when engaging in alternative forms of listening, amplifying, and recording). Kubisch's work revolves around electromagnetic field microphones and creating sound walks that focus on the depth of surrounding electromagnetic interference which exists in the world around us:

> Lighting systems, wireless communications, radar, anti-theft security devices, surveillance cameras, cellphones, computers, tram cables, antennae, navigation systems, ATMs, Wi-Fi routers, neon signs, public transportation networks, etc, all generate electrical fields – hidden as if under cloaks of invisibility, but with incredible presence.[18]

[18] Electrical Walks, "About Electromagnetic Investigations in the City," https://electricalwalks.org/about/.

While perhaps a simple element of listening on the surface, this is absolutely key to the experience of connecting to and understanding the complexity of place through augmented listening. In a powerful way, Kubisch's sound walks are placemaking exercises in real time; these sounds are not meant to be listened to in order to identify place for someone, but instead to allow a listener to reinvent and recreate place for themselves. The sounds which make up these alternate spaces of listening are simultaneously unidentifiable and so intrinsically intertwined with the experience one can have with place (whether they are from an electromagnetic field recording, contact mic recording, hydrophone recording, or other method of capturing):

> There are complex layers of high and low frequencies, loops of rhythmic sequences, groups of tiny signals, complex layers of pitches, long drones and many elements which change constantly and are hard to describe. Some sounds are much alike all over the world. Others are specific to a city or country and cannot be found anywhere else…The perception of everyday reality changes while you're listening to the electromagnetic fields; the everyday appears in a different context. Nothing looks the way it sounds. And nothing sounds the way it looks.[19]

I myself discovered electromagnetic field recording essentially by accident, as many others have, simply by experiencing interference unintentionally; this appraisal of Kubisch's work offers a fitting representation of why alternate modes of listening, capturing, and recording are so valuable for gaining a wide perspective on what makes up the essence of place.

The accessibility of less expert-focused devices, which somewhat encourage interference and less-than-perfect recording quality, helps prod us as listeners towards this type of consideration of place. My interest in this type of thinking came mainly from the technological access I have had in the previous few years, and specifically from the fact that I have not always had the most sophisticated equipment. Nonstandard methods of recording offer, in my experience, push listening towards considering sound as full of possibility and complexity — the same way we ought to

[19] Electrical Walks, ibid.

consider what builds a place. Composer and sound artistMichael Pisaro-Liu's reflections on his experience working as a collaborator with sound artist and field recordist Toshiya Tsunoda touch on these thoughts as well, with Pisaro-Liu pointing out that the experience of observing a place through recording is one that is deeply affected by biases and assumptions as well as filtered through the restrictions of the recordings themselves:

> ...[an] apparently electronic sound was obtained by placing a stethoscope on the ground very close to an insect. Even now, as I clearly hear the insect, my first apprehension of it as something synthetic stays with me. My attention here, and throughout this magical work, wavers between one mode of listening and the next, never resolving itself to a stable perspective. The "detours" (or misdirections) that formed the recording process yield something hidden in the situation.[20]

Developing a sound world consisting of both organic and synthesized/ processed sound elevates the listening experience from a place of guided observation to questioning and actively reconstructing a space — even if the space is reconstructed incorrectly. The significance of Tsunoda's work is dependent on interaction between the musical and extra-musical elements: "They are in constant motion; unstable, and we hear on one side of the membrane what happens on the other." This is an integral part of working with outside material in my music; just as in Pisaro-Liu and Tsunoda's views, self-referential and recursive relationships are integral to finding a meaningful interaction between music and its inspiration.

In speaking about his release *Extract From Field Recording Archive* (2019), Tsunoda posits that searching for alternate perspective is what makes this process of sonic extraction viable, saying:

> It can be said that the object of the vibration and the act of observation are inseparable…it is not really 'detection' or 'documenting', but is more likely closer to 'depiction'. The word 'depiction' has a nuance of both watching and portraying an object simultaneously.[21]

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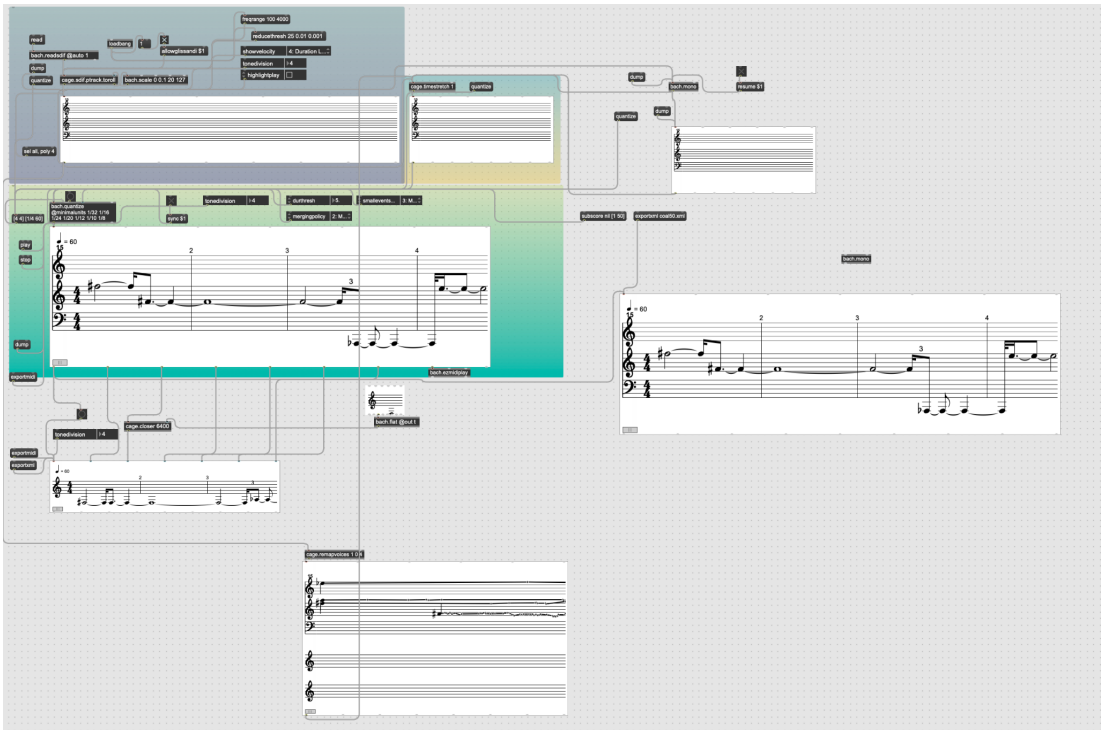
[20] Michael Pisaro-Liu, "Membrane – Window – Mirror (The Folded Worlds of Toshiya Tsunoda)," Surround, February 2015, http://surround.noquam.com/membrane-window-mirror/.
[21] "Toshiya Tsunoda - Extract from Field Recording Archive (5CD)," erstwhile, https://www.erstwhilerecords.com/store/p235/Toshiya_Tsunoda_-_Extract_From_Field_Recording_Archive_%285CD%29.html.

This dual nature of “depiction” is key to why I choose to gather sounds from places and use them as elements in musical performance. These places aren’t represented by the sounds, but their use as musical material creates a distinct relationship between the act of performing and the relation to place.

There are two mirrored elements that extend beyond simply gathering sound from place, and which I consider to be more in the realm of “extracting” sound from place and creating sound which relates to the concept of “portraying” place: translating sound into data and translating data into sound. In my practice as an acoustic and electronic composer, finding ways to turn sound into notation has been of significant interest to the development of my process, something which I see as a bridge between the more composition-oriented and sonology-focused aspects of my musical practice.

When creating notation from a field recording or other such audio file, I execute a spectral frequency analysis (using programs such as SPEAR or Audiosculpt) which I then process in a custom-built Max/MSP application I have built. With this application, I can alter the parameters of the notation and create alternate versions as I wish before any further commitment to the compositional process.



Custom-built SDIF-to-notation Max/MSP patch.

An important thing to note with this part of my process is that it is not computer-assisted orchestration, and I rarely (if ever) have used its results verbatim in a piece of music. It's perhaps best to say that this technique illuminates another perspective that I would not normally be exposed to just by listening, providing something which is closer to the portrayal of a sound source while avoiding doing so verbatim.

Conversely, this research has also spurred me to explore the opposite process: Converting data directly to sound. Given my aesthetic leanings as a musician, my exploration of sound gathering errs more toward noise, and my experimentation with data sonification has largely sought to explore the ways in which raw data can be represented as something that is aesthetically noisy, raw, and visceral, as opposed to something which fits into pitch-based parameters. As part of this, I have also eschewed using particularly sophisticated methods for these sonifications, instead choosing to pursue avenues that are not meant for data sonification (for example, importing raw data files into

DAWs as if they were audio files). This allows, in my opinion, for the data to speak more to what it is rather than what I want it to be, as I avoid using sonification parameters that are of my own design and simply take what is provided to me[22] — something which is at the core of this philosophy of sound gathering.

Date not remembered
Watching and portraying

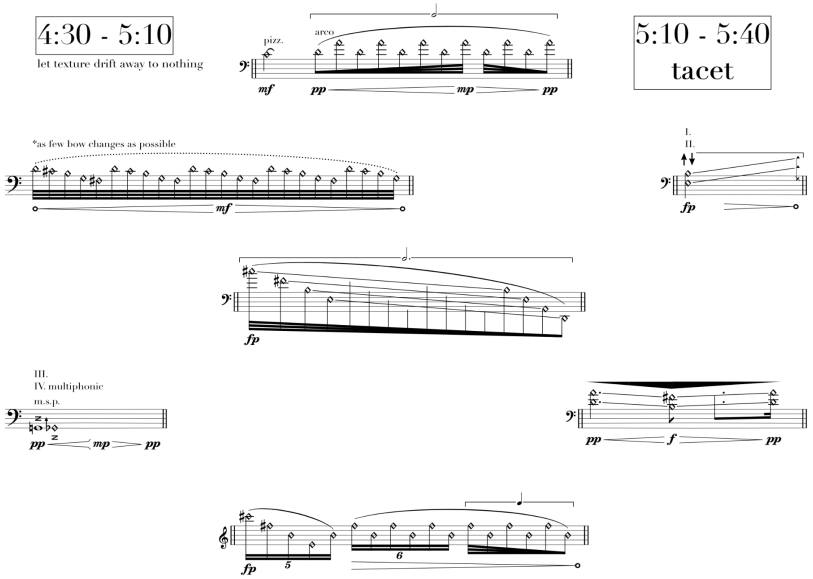
This philosophy of sound gathering is a constant thread in my music; I will point to a number of pieces from my time at the Royal Conservatory as examples of how I apply this practice, but perhaps the best starting point is the first piece I wrote in the Netherlands, *Date not remembered* (2021) for ensemble and electromagnetic field recording (developed in collaboration with ensemble Sketch351 for flute, trombone, cello, piano, and percussion). I hesitate to spend too much time on this piece, as it is not one of my most successful in terms of pacing and structure; however, though I had begun to develop these techniques of interacting with place through technology and performance prior to beginning my study at the Royal Conservatory, *Date not remembered* is a key moment for me as the first time that I approached composition as sonic placemaking, with its source material governing both form and musical material.

The source material is the recording which is described in this paper's introduction, a 21-minute and 4-second electromagnetic field recording taken at the Loretto Motherhouse in Kentucky with a $5 telephone pickup microphone. *Date not remembered* is formally incredibly simple: The recording is played in its entirety and ensemble material is shaped around it, with major moments of interference in the recording serving as structural pillars for the composition. Returning to Tsunoda's thoughts on depiction is key for the use of the recording as musical material

[22] I of course have to acknowledge that there are choices that I make which influence the results of this process, such as what types of programs to process data in, what types of data to use, and so on.

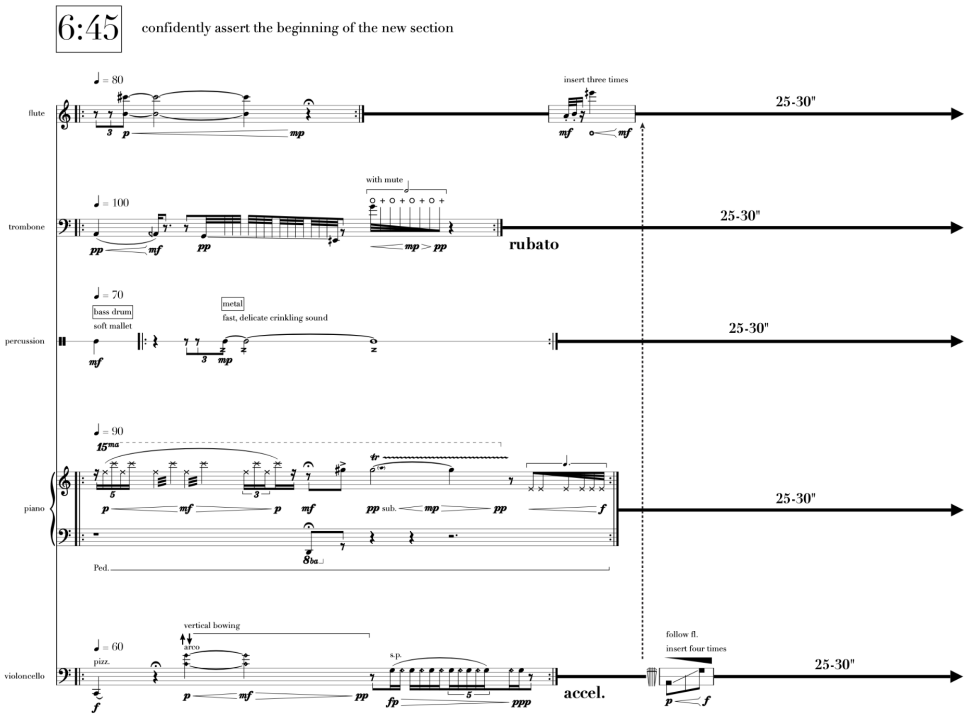
in this piece, which further provides us a straightforward starting point for considering placemaking techniques in compositional practice.

There are two ways in which ensemble material is written in the piece, which can be described — in referring back to Tsunoda's notion of depiction — as "watching" sections and "portraying" sections. The element of "watching" comes from our relationship as listeners to the recording itself; it is laid out in its entirety, allowing us to literally just sit and experience it as it passes by. During these sections, the ensemble interacts with the material individually and at their own discretion; each player plays these sections from individual parts which contain no reference to the other players, only a selection of notation and timestamps specifying when to play. There is no score for these sections, just possibilities for the players to explore the sonic space and 'watch' as the field recording passes by, inviting the audience to do the same.



Excerpt from cello part (page 4), 'Date not remembered' (2021).

The rest of the piece's ensemble material is drawn from spectral analysis of the field recording, converted to notation in my previously mentioned custom-built Max/ MSP application. While also notated in a relatively open fashion, this material is formatted as a score for the ensemble to have more precise interaction with the field recording. This exemplifies my view of "portraying" within the process of sound gathering and sonic extraction. The process of converting spectral analysis to notation is imperfect and doesn't result in notation that necessarily sounds like the field recording it comes from, instead, the ensemble is playing its own version of the recording which illuminates its qualities in unique and previously unseen ways.



Excerpt from score, 'Date not remembered' (2021).

Artistically, I have to acknowledge that *Date not remembered* is more of a test piece than a work that defines my output[23]; in some ways, it is too beholden to the form of the field recording to establish its own identity as a composition, with the resulting ensemble music both too active and not active enough in its relationship surrounding the recording to be especially convincing conceptually or as a piece of music on its own. However, its basic concept is an important starting point for this research and establishes a precedent for how my following works have grown and developed. The Loretto coal pit and surrounding community are interacted with from multiple perspectives of acoustic and electronic sound, resulting in a layered and unique experience of reflection.

[23] At the same time, I have to also acknowledge Sketch351, who were wonderful collaborators on this project and performed it beautifully, while now also growing into repeated collaborators and friends.

III.
Repetition, rootedness, and uprootedness

The physical world is built through repetitive acts. It's a simple statement, but look to the ocean, for example, and you'll see shorelines shaped by the repeated lapping of the ocean's waves, shells whittled down over time into sand, and islands formed by repeated volcanic eruptions. In the same way, place is built through repetition. People come to a space for a purpose and return, and return again, and within time this purpose becomes reinforced by tradition — a place validated by repetition.

Repetition casts a large shadow over presence and meaning in the act of placemaking. Archaeological and anthropological perspective offers a distinct view in relation to this, with much research focused deeply on the importance of recursion to place and the balance of existence which makes place. Place is validated and built by repetition, but this also necessitates contextualization within the spectrum of repetition and change. Maxime Lamoureux-St-Hilaire and Scott Macrae's research on settlement abandonment and historical precedent for placemaking-focused thinking provides some context for this perspective:

> Entanglement with place — as part and parcel of sedentism — often is perceived as occupying one end of a continuum of movement that ranges from highly mobile on a seasonal or annual basis to highly sedentary or fixed in place. Often, the fixed-in-place end of the continuum is valued by researchers over the highly mobile end…Such differential valorization leads us to ask why we — as humans of the Anthropocene — so value rootedness and disdain uprootedness when the history of our species is primarily a story of movement and migration. We value stasis when, in light of the longue durée, it might be more accurate to think of periods of stasis as highly unstable (and unsustainable) moments that punctuate more prevalent periods of movement. It is rootedness in place that creates the (often painful) experience of uprooting from place.[24]

[24] Maxime Lamoureux-St-Hilaire and Scott Macrae, *Detachment from Place: Beyond an Archaeology of Settlement Abandonment* (Louisville: University Press of Colorado, 2020), 12.

This notion of the "rooted" and the "uprooted" is key; the element of movement and mobility — musically, erring more towards complexity — is as important as the element of repetition itself to building this connection to placemaking as an artistic practice.

Composer and performer Caterina Barbieri touches on this with her work and consideration of repetition, as well, noting that a key aspect of the experience of repetition in music is what change occurs outside of the repetition itself — this balance between the rooted and the uprooted in relation to what "makes place":

> "Repetition changes nothing in the object repeated, but does change something in the mind that contemplates it," says Gilles Deleuze. I love this quote…I use repetition and other recursive musical elements as a media to create a specific psychic state, similar to trance or hypnosis. It's an altered state of consciousness, where it's easier to become receptive and present in the moment. A state of hyper focus, that exists beyond binary thinking: dualities between subject and object, inner and outer, physical and spiritual seem to crash all at once…it's more about the changes we, as listeners, undergo rather than the changes the material itself undergoes.[25]

As Barbieri states, there is a deeper nature to repetition in art than simply recursion of a sound, gesture, or other such elements. Exploration of place and placemaking can come directly from the way in which the conventions of repetition — this "rootedness" — can be explored and stretched, providing a useful avenue for interaction with an object and a legitimate basis for considering repetition at proportions beyond that of short forms. The state of repeating or not repeating — rooting or uprooting — and its consistent push and pull is a foundational element of how we make place as humans, but as Barbieri notes, recursion spurs us to change as listeners in ways that are less tangible.

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[25] "Interview: Caterina Barbieri, Nkisi & Bendik Giske on Playing Re-Textured Festival 2022," *Something Curated*. https://somethingcurated.com/2022/03/22/interview-caterina-barbieri-nkisi-bendik-giske-on-playing-re-textured-festival-2022/#:~:text=CB%3A%20%E2%80%9CRepetition%20changes%20nothing%20in,about%20my%20work%20with%20repetition.

This mindset provides a foundational basis for form and structure in the process of translating placemaking into an artistic practice. These previously-outlined methods of sound gathering work hand-in-hand with this; material is gathered from a place out of time, and repetition gives this material a structure that builds the material into something which allows us to engage in the previously-mentioned concept of "depiction." Visual artist Bridget Riley noted that repetition "on the one hand…acts as a sort of amplifier: making active events that might otherwise go by barely unnoticed."[26] This relationship has its counterpart: As composer Bryn Harrison has noted, one "can make music present simply by being reiterative."[27] Older composers, such as Morton Feldman, brought this to the forefront of their process, saying that such an approach as "[having] the same thing come back again, but...just [adding] one note"[28] was a manner of "formalizing a disorientation of memory"[29] — an act which provides a framework for music to be centered around this process of deterioration and reinvention, stasis and movement.

This also plays into the feeling of the manipulation of time and space that can occur with changes in individual repetitions, a primary goal for Harrison (and a driving force in his analysis of other works). Even with lengthy periods in music, such as those in the late works of Feldman, direct repetition is not always the goal, as small and nuanced changes to repetitive patterns can govern the way that the sense of time is distorted:

> Feldman's penchant for pattern extension by near repetition poses a distinct cognitive challenge: the proliferation of near repetitions frustrates attempts to prioritize events by distinctive features, and thereby to categorize, or even remember, individual instances.[30]

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[26] Bridget Riley, quoted in film documentary *Bridget Riley* by David Thompson, dir., (Roland Collection of Films and Videos on Art: Arts Council of Great Britain, 1979).
[27] Bryn Harrison, *Cyclical Structures and the Organisation of Time*, PhD thesis, 2007, University of Huddersfield.
[28] Morton Feldman, 'Anecdotes and drawings', in *Essays*, ed. Walter Zimmermann (Kerpen: Beginner Press, 1985), 178.
[29] Feldman, 'Crippled Symmetry', ibid, 127.
[30] Hanninen, 227.

My interest in this phenomenon is not focused on its organic deployment, like that of the works of composers like Harrison and Feldman, which utilize significant periods of time — instead, my focus is more on how we can manipulate time without relying on significant length and the distortion that can come from long-term listening experiences, exploring how this balance of 'rootedness' and "uprootedness" can be engaged as a structural element of shorter-form works. It is perhaps most important that this process can be both practically and conceptually focused on what Feldman calls "a conscious attempt at 'formalizing' a disorientation of memory"[31] regardless of its actual length or conceptual timescale. Interacting with places and physical spaces in music directly involves an imperfect recreation of a memory or view of something, with these techniques of repetition providing a way of building a structure to represent them.

Within this broad mindset around repetition, I also aimed to explore the extent to which the success of repetition lies in its immediate digestibility. Common convention in previous years focused on clear, short-form repetitions as those with the most weight (as shown by the staying power of the New York minimalists of the 1970s and 1980s, from Phillip Glass and Steve Reich to the founding composers of the Bang on a Can collective, as well as European giants like The Hague's own Louis Andriessen). But others have looked to different forms of repetition entirely while engaging in a noisier and more sonically complex aesthetic. Bryn Harrison's work is focused on layers of repetition in differing timescales, while others, such as Alex Mincek, Eric Wubbels, and Scott Wollschleger, have latched onto repetition with a major focus on Feldman-esque "disorientation," with heavily complex textures getting stuck in detailed loops. The music of Sarah Hennies provides an example of both approaches combined, creating environments that are both constantly shifting in the short term and locked in long-form repetition, with a balance of the complexity of texture and simplicity of pattern. The focus on repetition shared by these composers

[31] Morton Feldman, *Give My Regards to Eighth Street*, 137.

establishes something which is not as easily digestible, showing a blueprint for how composition within sonic placemaking can explore a tense balance between the rooted and uprooted, using form and structure to both establish and question notions of "place" in art.

(almost always is nearly enough)
Repetition as a structural basis

While the main point of interacting with these different compositional practices is, generally, the integration of all elements, it's worth acknowledging that this is not always feasible for the timeline of every given artistic work. When presented with an opportunity attached to a quick turnaround and hard deadline, it can be obstructive for one to approach the research necessary for the serious and thoughtful pursuit of an analysis-based work. However, both the benefit and the necessity of working towards the development of an integrated artistic practice is the opportunity to use its individual components as fuel for artistic works. This is of particular importance in relation to the use of repetition in my compositional practice. While the methods of analysis and sonification I engage in are somewhat less common and are almost always used in conjunction with some sort of extra-musical connection in the music, repetition is of course a huge element in the work of a wide variety of artists' works, making it of key importance that repetition in my practice is considered for both aesthetic reasons and my own conceptual reasons.

One such example of this is the piece *(almost always is nearly enough)* [2022], scored for one flute player (doubling C flute and bass flute) and string trio (violin, viola, and cello) and written for the Chicago-based Ensemble Dal Niente.[32] This project presented me with two challenges to the goal of my artistic practice: First, I was given less than four weeks from the time of commission to the date of score delivery (two weeks of which would coincide with another residency), and second, I

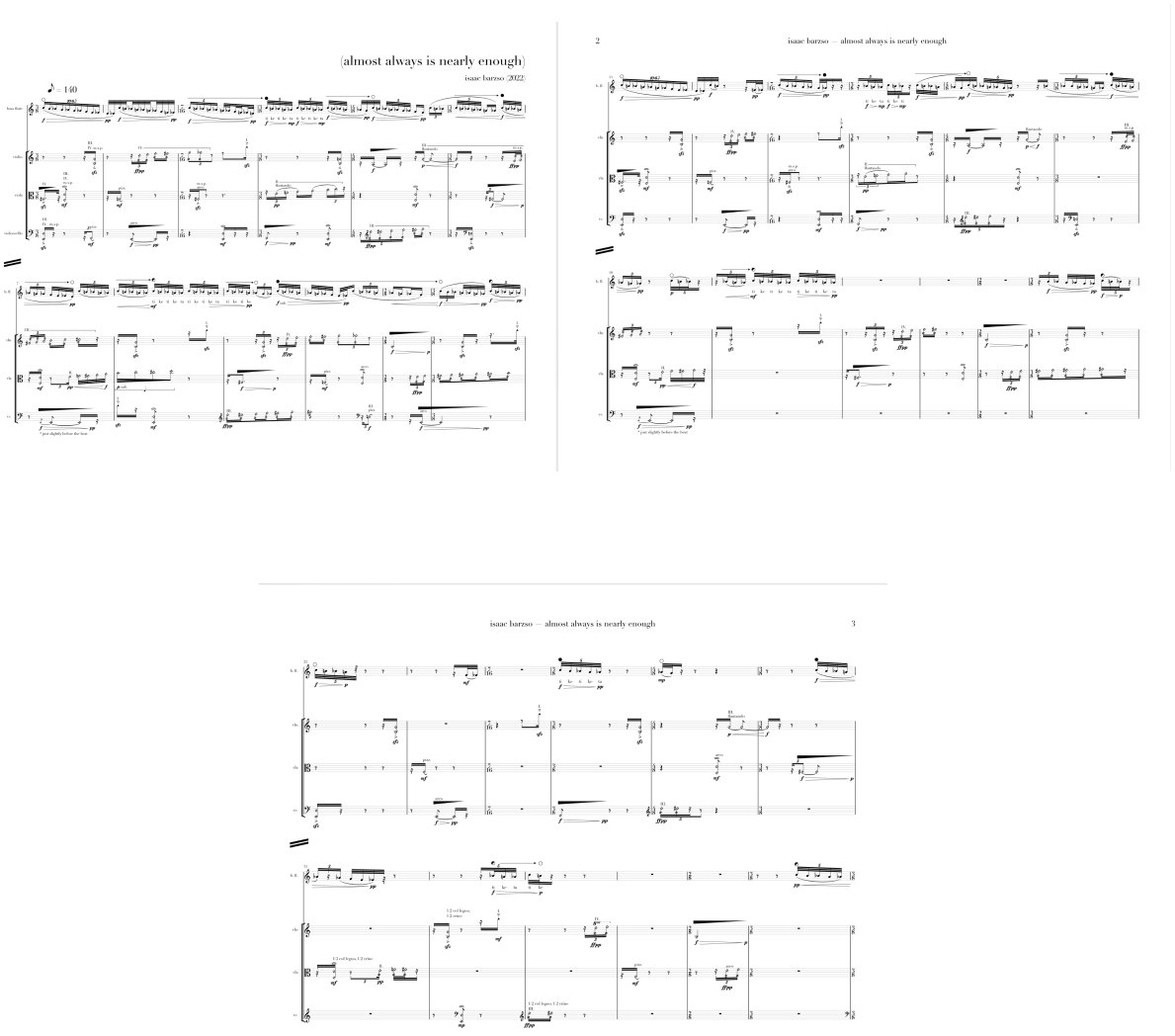
[32] I also wish to acknowledge that the definitive performance of this piece so far was given by East Coast-based American ensemble earspace, whose recording completely brought it to life for me.

was not given the opportunity to collaborate with the ensemble. This, of course, is the reality of much of the composition world, and the strength of developing an artistic approach is to be able to explore and grow in its many facets. Instead of being a comprehensive integration of this research, the piece became a study on developing a recursive structure as a compositional framework. Of course, it isn't fair to say that the piece is devoid of an extramusical connection outside of form and structure. Its title is borrowed from "Almost Always is Nearly Enough," a song near the end of American band Tortoise's 1998 record *TNT*.[33] The last songs of *TNT* contain a pattern in which the last sample of each song immediately is used as the main musical element to begin the next, creating a simple recursive pattern, with the referenced track being a particularly clear example of its usage. In the same way, each major section of *(almost always is nearly enough)* takes an element from the preceding section and uses the chosen element as its entire basis, creating a recursive framework to be used as the entire structure of the piece.

Repetition in (*almost always is nearly enough)* is not about what repeats so much as it is about what doesn't repeat, what is left behind, and what is passed by as the music progresses — a singularly-focused example of how repetition can aid the process of depiction and finding alternate perspective in a piece of sonic placemaking. With the opening of the piece used as the main springboard of musical material for the following sections, it also serves as a direct introduction to this process of recursion and the addition of decay as a main structural element, constantly moving the piece's states of "rootedness" towards its states of "uprootedness." For example, the opening three pages operate under a simple process of decay: 12 measures open the piece, which is then repeated verbatim twice afterward — except with one-third of the material removed the first time

[33] It's also doubly intentional that I chose this title and inspiration when working with this group, as Dal Niente released a record with a piece by Tortoise member Jeff Parker (*Water on Glass*) just a few months before my working with them.

and two-thirds of the material removed the second time. No material is added, only subtracted, creating a constant sense of uprooting amidst what is still conceptually rooted material.



Recursion and decay in the first three pages of '(almost always is nearly enough).'

Rootedness and uprootedness thus exist together in the same moment, and this push-and-pull between types of repetition becomes a main concern of the piece. For example, in a later section, single gestures repeat constantly with slightly different configurations and variations, threatening to descend into entropic patterns of either decay or surges of growth, only to then be balanced by significant periods of strict literal repetition. All the while, the end of each section spurs the next

into its own repetitive structure, leaving change and stasis formally intertwined throughout. This process provides a space for *(almost always is nearly enough)* to exist wholly as a product of its own recursive structure, in which nearly every period of stasis is rooted up and recast once again as a *new* period of stasis. In considering the relation of this repetition to placemaking, It's important to return again to Lamoureux-St-Hilaire and Macrae's comments on periods of stasis and movement, specifically focusing on the idea that stasis is unsustainable and is always in danger of being disrupted ("It is rootedness in place that creates the…experience of uprooting from place"). Setting up recursive patterns that are marked by instability in their stasis mirrors this conceptually and appeals to a very human part of existence, priming listeners to essentially treat the piece's recursive structure as a placemaking act, fluid and subject to change at any moment.

IV.
A world in constant flux:
phantom islands, saltwater superstructures and *welcomed not belonging*

The main focus of this research is not on its individual components but the synthesis of these individual elements into something which engages in placemaking on multiple levels simultaneously. Conceptually following the lead of the aforementioned *Date not remembered* and *(almost always is nearly enough)*, my thoughts on how repetition could provide necessary structure to 'sonic placemaking' were immediately put to work alongside exploration of place and its transformation through the use of technology in two paired works which followed *(almost always is nearly enough)* in summer 2022: *phantom islands, saltwater superstructures* and *welcomed not belonging.* These pieces ask two main questions about my process: First, how do the elements chosen to represent a place reflect its transformation into music and the communication of the place to an audience? And second, how do musical structures influence the execution of extra-musical concepts?

In the summer of 2022, I was asked to write a new work for piano and harp for the 2022 Yarn/Wire Institute & Festival (curated by New York City-based quartet Yarn/Wire), which became *phantom islands, saltwater superstructures* (with the addition of myself controlling electronics alongside Yarn/Wire pianist Laura Barger and New York City-based harpist Kathryn Sloat). Preliminary conversations with the group specifically related to my interest in translating physical space into music, with an instigation to use my exploration of the Netherlands — specifically that of the country's coastline — as a driving force of inspiration for the piece, conceptually bringing the west coast of Europe to the east coast of the United States for its New York City premiere.

The coast became a pivotal part of this process. I spent most of my life centered in a city of about 15,000 residents on the East Coast of Florida. The coastline was an essential component of my upbringing and existence, with dunes, plants, trees, and animal life all proportioned in a specific manner that I could not forget. I was surprised to move to The Hague and find that the beach almost constituted a sort of mirror image to the ones I had grown up near, an uncanny resemblance broken up only by hills and its northwest alignment. What made this place truly different from the ones I had grown up with? I saw few differences and could hear few differences, so instead, I sought to listen to and document this place in a new way outside the visual or audible norms.

When working to create an audio document of a space, one might note that perhaps the easiest and first instinct for any field recordist would be to focus on a traditional element of the space. For a beach, it's reasonable to approach a standard audio field recording of ambience, or perhaps even a hydrophone recording of the water, in order to get a "representative" document of the space. It was for this reason that I instead asked the question: What information can we get from the *abnormal* elements of this space? We can look at a beach and see that it consists of sand, plants, water, sea life, and beach-goers. But what about that which we cannot see? Is it not still a part of the equation? For me, these elements are what bridge the gap between knowing a *space* and knowing a *place*, knowledge that is unlocked when we search for the underlying nature of something. With this goal in mind and building on my recent background working with electromagnetic field recordings, I explored The Hague's Zuiderstrand beach with a powerful electromagnetic field microphone and found that this natural, organic space was filled with unseen activity — electromagnetic interference constantly changing and transforming, sound as strong and powerful as any crashing wave, gust of wind, or bird call around me was. The origin of the sound is almost as fascinating as the sound itself; the presence of so much technological interference in a natural space raises more questions about the way that humans have changed nature than this research is prepared to answer.

As said by Michael Pisaro-Liu, "The world we see looks stable, but the world we learn to hear…is in constant flux." In a fitting example from the 1999 film *The Matrix*, he notes:

> "The most vivid scene in *The Matrix* is when Neo begins to see the world transform before his eyes, as it bends and flexes, and then changes to streams of numbers. It is vivid because we know this is the case: the world is different from the evidence given by our direct perception. In *The Matrix* the illusion of the world is maintained by a computer program, hence, when Neo sees the numbers, he is seeing a real world not apparent to others. This is a relatively simple way of showing that things are not as they seem, that there's another reality hidden in what we think we perceive."[34]

The reference to *The Matrix* as a document itself aside, the driving force for the development of *phantom islands, saltwater superstructures* was the exploration of this same concept: Objects of all kinds, from large physical spaces to minute singularities, are fluid in nature. In what ways can one's artistic approach represent this fluidity?

The nearly 30-minute recording taken on the Zuiderstrand formed the basis of the piece, with sections of the recording edited down to 17 minutes (along with subtle processing for the purpose of sound quality) and played through transducers placed on the piano and harp. I approached the sonification of the space through two avenues: The field recording itself, and a notated translation of a spectral analysis of the field recording, which formed the basis of the music for the piano and harp.[35] As the players performed a sonified version of the given space, the transducers played the recorded version of the space back into the instruments — in a way, creating a hybrid artificial-conceptual feedback loop between the two.

Two sections of the piece are perhaps the most important for my approach to representing the fluidity of this space: The central (mm. 27 to mm. 43, lasting around five minutes in a

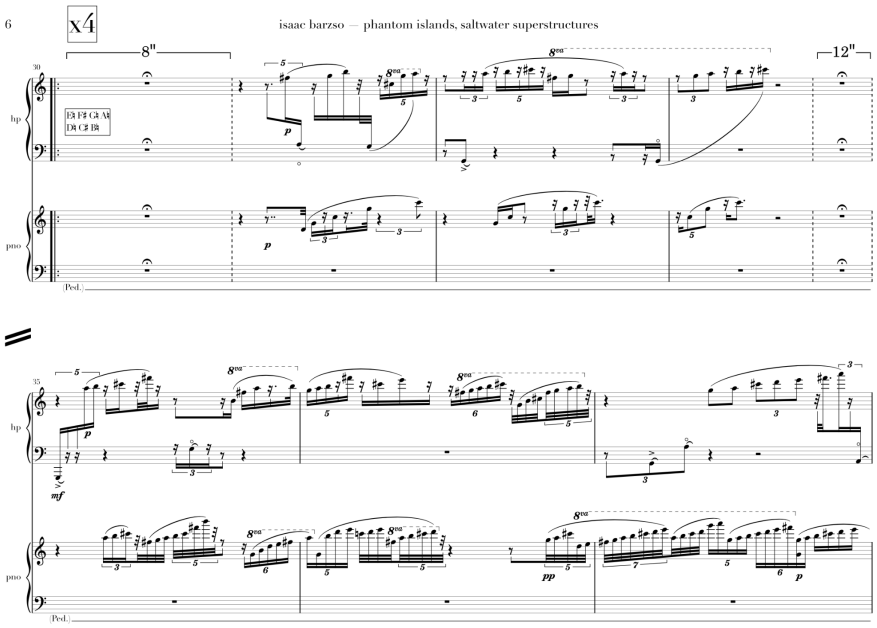
[34] Michael Pisaro-Liu, "Membrane – Window – Mirror (The Folded Worlds of Toshiya Tsunoda)," Surround, February 2015, http://surround.noquam.com/membrane-window-mirror/.
[35] This notated translation was done using my previously-mentioned custom-built Max/MSP application.

performance) and closing (mm. 63 to mm 67, lasting around two minutes). To develop a "space in flux," I chose an approach that has some elements in common with what some have deemed "temporal extension" or "pattern extension." One notable example of this characterisation is scholarship about the works of composer Morton Feldman, such as this consideration from music theorist Dora A. Hanninen:

> Feldman's late works are characterised by patterns that acquire temporal extension through repetition. Significantly, in late Feldman pattern extension tends to involve not literal extension but semblances of repetition – numerous, often uncoordinated, adjustments in duration, timbre, and pitch. Feldman's penchant for pattern extension by near repetition poses a distinct cognitive challenge: the proliferation of near repetitions frustrates attempts to prioritise events by distinctive features, and thereby to categorise, or even remember, individual instances.[36]

A key for my interaction with similar ideas to these is that near-repetition and literal repetition play into each other in such a way that the presence of one can cast doubt on the nature of the other. As previously discussed, on the surface, a space may appear to be in stasis even as we know that it is in constant movement and states of change: This is represented in the piece by the relationship between the players and the electronics. In the central section, the players repeat the same pitches and ascending gestures constantly in compressed and expanded fashions — much along the lines of Feldman's "numerous, often uncoordinated, adjustments in duration, timbre, and pitch." These almost-repetitions are then encased in a literal box of repetition, repeating 14 measures four times. The recorded material is played at the same time as the notated material, but it is allowed to morph and grow naturally where the notated material continually repeats.

[36] Dora A. Hanninen, "Feldman, Analysis, Experience," Twentieth-Century Music 1, no. 2 (2004): pp. 225-251, https://doi.org/10.1017/s1478572205000137, 227.



Beginning of repetitive structure in 'phantom islands, saltwater superstructures' (score, page 6)

In my view, these are two perspectives of the same documentation which have simply been allowed to develop and grow at different paces. For the players, the enclosure is the same while its details slightly shift from moment to moment, always repeating the same gestures in new ways. However, around it, the other perspective of the same space swirls, changing and transforming itself. The two layers are constantly at odds with each other, but conceptually the same: a space that is somehow both constantly changing and constantly remaining at rest. I had watched the beach remain in its calm loops — waves crashing, the wind blowing, and birds calling with general regularity — while I listened to its hidden sounds transfigure in a secret world. A place is not caught in time and is not defined by one linear experience, but by a collection of them; in using multiple time-scales at once, the world of *phantom islands, saltwater superstructures* similarly is not defined by one linear experience in its transformation of The Hague's Zuiderstrand. According to Jayna Brown, this act of changing our understanding of place and building better places for one another requires this shift in thinking, even if only available on the smallest of scales:

> I suggest that we see and feel our way not into a future but into an altogether different spatiotemporality that is not discoverable along a human timeline. Utopia is inaccessible because it requires a complete shift in how we understand time. It is not accessible in standard linear time or in normative spaces. As we open ourselves up to the possibility of new ways of being, we must be brave enough to accept the idea that there are temporalities and spatialities beyond human imagining.[37]

This concept goes a step further in the companion piece, the fixed media work *welcomed not belonging*. This piece, written concurrently with *phantom islands*, offers another perspective of the same field recording. Rather than using the recording as material as in *phantom islands*, I instead used the unedited recording in full and processed on top of the raw audio, always maintaining the original while augmenting and reworking elements of its presentation. This process highlighted the document in a completely different manner: Rather than using the place as material for a piece of music, the place is itself amplified fully. The music benefits from this as well, as the natural structure of the field recording provides a strong musical form (beyond the captivating sound which comes from an EMF recording).

[37] Brown, Ibid, 8.

V.
Data sonification and reimagining the future: *Untitled.exe*

Can place be something that no longer exists? Returning to Tim Cresswell's commentary on defining place, an interesting point is made when considering place as more than a physical location, but a preservation of space and time. In speaking of changes made to New York City's Lower East Side from the 1960s to the early 2000s, Cresswell speaks of place as something rather more than simply a physical location:

> The museum is an attempt to produce a 'place of memory' where the experiences of immigrants will not be forgotten. The gardens are the result of the efforts of immigrants and others to carve out a place from a little piece of Manhattan for their community to enjoy nature. Some of the community gardens — often the first to be leveled — are the sites of Casitas-little houses made by the Puerto Rican community to replicate similar buildings from 'home'. They are draped with Puerto Rican flags and other symbols of elsewhere.[38]

The pivotal point of this commentary is the notion that placemaking is not always just about making a better future out of the present, but it can also be about building a better future through direct reference to the past, accessing our so-called "places of memory." This is of extreme importance for why I do what I do as an artist. My work is nostalgic and sentimental — my work is a testament to the good things which I have experienced and a desire to bring them with me as I build my future.

Of course, these experiences are not entirely just personal, and many topics allow for a space where personal sentimentality stretches deeper into a shared cultural experience. Exploring the past as part of the future became the focus of *Untitled.exe*, a 2022 work based entirely on sonification of the installation files for the Windows 98 operating system and inspired heavily by cultural nostalgia for the late 1990s and early 2000s.

[38] Cresswell, "Defining Place," 15.

As journalist Günseli Yalcinkaya puts it, a recent cultural reemergence in early-2000s media could be seen as driven by the freedom originally found in the nascent days of the internet:

> A World Wide Wild West, the 2000s marks an innocent time in internet history where Geocities and online forums served as global villages, where like-minded people could gather en masse for the first time ever…Piracy file-sharing services like Napster and Limewire revolutionised and democratised the way we consume media, while platforms like Second Life and Habbo Hotel responded to the onset of new technologies with bold metaverses ripe for exploration…For many of us growing up, the internet was our first chance to experience the world outside the limits of our immediate surroundings. Dialling up to the internet felt like entering a magical world removed from IRL.[39]

This is a major point of my interaction with the past in my art: Where are the places in time ('places of memory') that brought us the most security and happiness? What brought us these feelings then, and how can we bring them with us now that the time has passed?

My first experiences with interactivity and freedom in technology came when I could have been no more than five or six years old by way of an unwieldy beige Gateway PC running Windows 98 in my mother's work studio. From time to time I would get the opportunity to play a select number of CD-Roms, generally educational titles. I sincerely remember a large number of them, and very fondly: *Jumpstart Spanish*, *Winnie the Pooh: ABCs, Finding Nemo*. Eventually that huge monitor got moved into my bedroom when my parents upgraded their main desktop — at night my darkened room glowed in the harsh light of cathode-ray interlacing. This 'memory place' is pivotal to me not for any specific reason, but simply because I had gained a small bit of freedom of exploration — as in the words of Günseli Yalcinkaya, finally a world outside my immediate surroundings.

[39] Günseli Yalcinkaya, "Why Are We All so Obsessed with Early Web Nostalgia?," Dazed, February 28, 2022, https://www.dazeddigital.com/science-tech/article/55404/1/why-are-we-all-so-obsessed-with-web-1-nostalgia.

Over time this nostalgia has creeped into my enjoyment of art as a daily event, as well. The rise of the vaporwave genre — which incorporates aspects of late-1990s pop culture and manipulated recordings of late-20th century smooth jazz and lounge music — occurred when I was a teenager in the early-to-mid 2010s, periodically making its way into my listening over the subsequent years. Artists of recent years have often referenced the nostalgia for an era of nascent technological expansion in their work, whether in the fine art-focused projects of multimedia artist and composer Samson Young (such as in pieces like 2008's *Ageha.Tokyo*) or less academic works like musician and comedian Gabriel Gundacker's 2017 *Unofficial Wii Sports Soundtrack*. In reference to Thomas Meadowcroft's 2021 *Another Children's Television* — a piece which presents itself as an archive of invented children's television jingles from 1970s Australia — American music theorist Judith Lochhead singles out key aspects of music which access these "places of memory": The processes of "hearing memories become now" and "hearing the sound-things of memory."[40] In speaking about the piece, Meadowcroft notes that the process of "hearing memories become now" contains a duality about the way in which we handle nostalgia through art, dealing with both the feelings of freedom and acknowledgment of naivete that come with the nostalgic experience:

> On the one hand, these musical blocks of Anglo-American cultural memory induce a melancholia for a lost time, when daily routine was shaped by free-to-air television, and not everything was privatized. On the other hand, to quote Walter Benjamin, 'in waste products, children recognize that the face of the world of things turns towards them, and towards them alone.'[41]

How do we recover this freedom and these "memory places" through our work? Finding an answer to this question for myself and a small group of collaborators became the goal of *Untitled.exe*, which was written for the Konstruct.23 project organized between the Royal Conservatory and percussion

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[40] Judith Lochhead, "Music Now: Sonically Imagining New Futures" (presentation, 2022 Yarn/Wire Institute, Stony Brook, NY, June 20, 2022).
[41] Chloe Rabinowitz, "Yarn/Wire to Perform Composer Portrait of Thomas Meadowcroft," BroadwayWorld.com, https://www.broadwayworld.com/article/YarnWire-to-Perform-Composer-Portrait-Of-Thomas-Meadowcroft-20220321.

group Slagwerk Den Haag. This project allowed me to collaborate closely with a percussionist (in this case my fantastic colleague João Brito) in the development of a new work, which grew into a piece for quartet with live and fixed electronics and video in December 2022 (receiving its premiere in Korzo Theatre in The Hague).

The first step of this process centered around developing a translation from the concept of Windows 98 into a sonic experience. Since early 2022 I had been experimenting with alternative, fairly unsophisticated methods of sonifying data, and sometime after the summer I stumbled upon the least sophisticated and most fitting of all of them: the direct translation of .exe files — executable files often used in the Windows operating system as the main launch point for computer programs — to audio. I wish that I could tell you this process was difficult, but it was almost ridiculously simple; in fact, the freeware program Audacity allows one to import raw data files (such as .exe files) into the program and have them translated into audio. This process mainly results in bursts of complex noise, sometimes detailed and intricate, yet mostly overwhelming and incomprehensible. I chose to work with an original Windows 98 installation file[42] as a sort of toolbox for sonic extraction.[43] The file ended up being just over 55 minutes long, mainly consisting of long stretches of white noise with slight interference present here and there. However, there was a significant divergence from this material, as well, with moments of acrobatic, exciting bursts of pitch and moments of short irregular repetitions that easily remind one of glitches. Easily the most exciting part of the sonification is what I call the "sound compression" section: Seemingly, every sound used in the program, from start-up noises to alerts to clicks, was compressed into 43 seconds of material, creating a fascinating sonic experience as the sonification seemingly "cycles" through

[42] I got this file from an online community of people who still use Windows 98 and other long-outdated operating systems, claiming that these systems work remarkably well on newer computers — with their main claimed downside being that they cannot handle the speed of the modern internet.
[43] I did the same with the Dutch release, in a nod to my current home, but it is hard to say if there was any difference in the sonification.

every sound in the entire program while being briefly interrupted by bursts of noise. The "sound compression" is one of the most amazing things I've found in my searches for these types of sounds, a moment where an object is able to say "here is all of me — and presented in a very digestible bite."

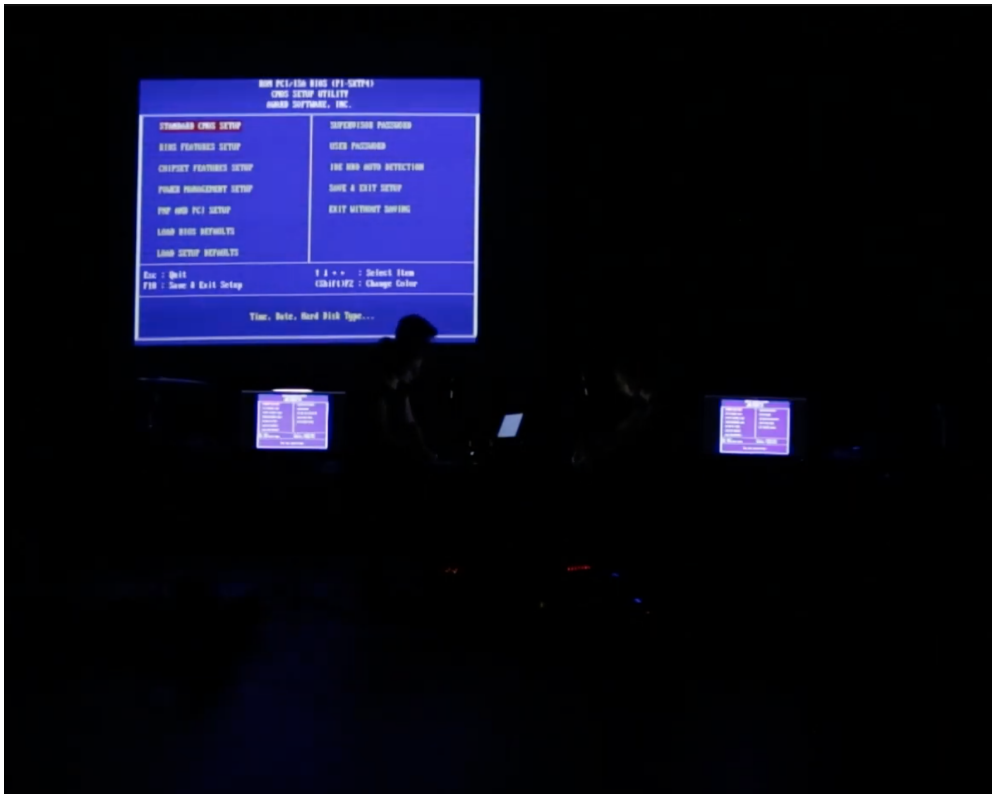
"Sound compression" from Windows 98 sonification.

This audio fascinates me because it contains a duality — there is something aggressive and unexpected (the harsh noise) beneath this concept I have so much nostalgia for, yet at the same time, it contains something so clear and direct as a representation of itself (the "sound compression"). It challenges what I thought I knew about the inner workings of this experience which I have so much connection to while simultaneously reminding me that some aspects will remain warm and inviting — perhaps even a bit comical. In a way, its duality contains the same experience as Thomas Meadowcroft describes as part of *Another Children's Television*, where sentimentality is balanced by an acknowledgment and reminder of commercialization.

The final aspect of the process focused on finding the links between the material, myself, and my collaborators. Though I approached this concept for personal reasons, I also felt it provided a healthy space for others to connect with it. Many people of my generation — especially those with enough privilege in life to be attending a conservatory — grew up with a similar experience to mine in terms of introduction to technology and resulting nostalgia over the technological aesthetic of the early 2000s. This proved itself in this process, as when João and I approached the other three members of the quartet involved in the project — João Borralho, Maria de la Calle, and Ludovica

Ballerino — their reactions to the concept were extremely personal. Finding the "character" of the sonification and its relationship to percussion and the act of sound-making was an integral element of their contribution to the collaboration. As performers, we conducted sessions of exploration between the sonification and different instruments, but also exploration between the sonification and purpose of interaction — as we built the piece, João, João, Maria, and Ludovica all each made suggestions and musical decisions based on their memories of technology from the past.

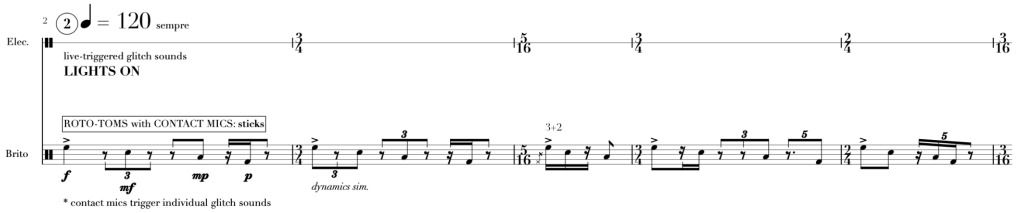
From here, our team was able to begin the process of making connections between the acoustic and electronic sonic worlds we had begun to work with. In a way, this process involves balancing what we might call "symbols of elsewhere" (calling back to Cresswell) with "symbols of here," a balance between the past and the present — the electronics and the instruments, in this particular case. Establishing this relationship began with making direct connections between the two elements, a process that one can look at as a form of the present recalling the past. For example, the opening of the piece calls for one of the performers to play roto-toms which are connected to a live-triggering system via Max/MSP. Each strike of a roto-tom results in a sample from the sonification being played back — a literal version of the present recalling the past. This is a recurring theme throughout *Untitled.exe*, as live-performed events act as triggers for the electronics, causing a chain of recall throughout. The visual element of *Untitled.exe* is similarly pivotal to its existence as an act of placemaking and connecting disparate life experiences. My personal connection to the darkened room and the distinctive look of the operating system is reinforced as a performative element, with fixed video cues triggered throughout the piece (both projected on a wall and displayed on computer monitors) which coordinate with lighting cues to illuminate a darkened space with video capture of the installation process for the Windows 98 operating system.



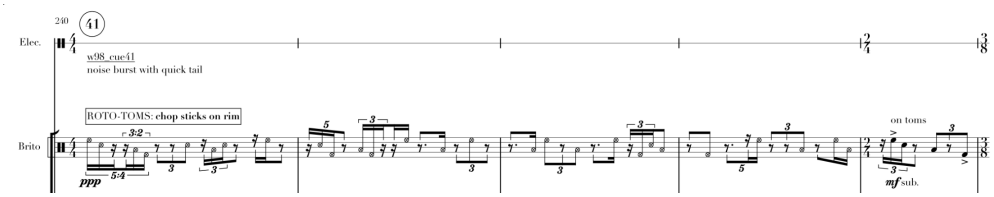
The darkened space during "Untitled.exe," Korzo Theatre, The Hague, December 8, 2022.

This continues with the form and the use of repetition throughout the piece. In *phantom islands, saltwater superstructures*, recursion and stasis were featured elements of the piece at differing timescales, but in this piece, they alternate in patterns of rooting and uprooting. At its core, *Untitled.exe* considers where we have gone since the period of this technology's heyday, close enough to be remembered vividly while at the same moment so different from our current place in time and technological development, and the structure of the piece relies upon this conceit. A simple repetitive pattern — four roto-tom strikes repeating in different rhythmic configurations — finds its way as a key structural landmark of the piece throughout. The treatment of this pattern is important for establishing and reiterating this process of rooting and uprooting in the music. Formally, *Untitled.exe* consists of a video-and-electronics-only introduction, four musical sections, and a video-and-percussion epilogue. This roto-tom pattern begins the piece proper and serves as

its main musical material for the first section (a minute and thirty seconds of the performance duration) before being left behind by the switch to the piece's second main section. In this way, it exists as the stasis disturbed by the moments of change, the rooted uprooted. However, it returns twice more — in the middle of the third section of the piece and as the main material of the epilogue — to interrupt firmly-established sections, turning the role of the pattern from the representation of stasis to an agent of transformation and disruption, all the while making it clear that structural relationships in the piece are not restricted to their existence in only one form.



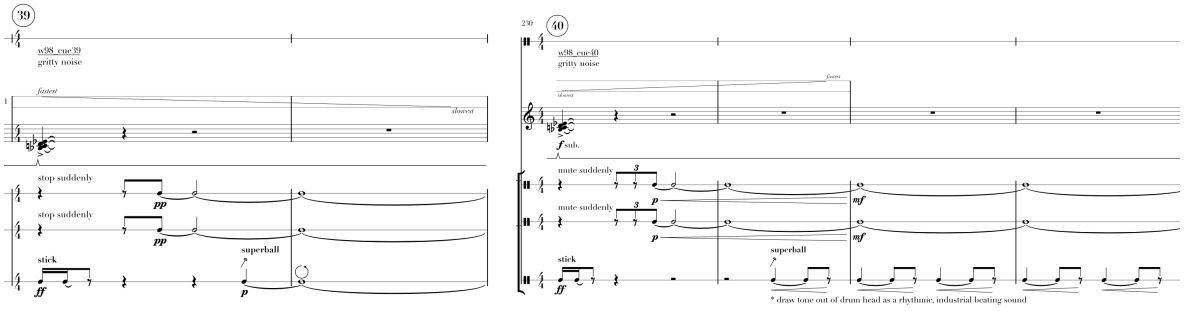
Main structural repeating pattern of 'Untitled.exe' (score, page 1)



Repeating pattern as an 'uprooting' moment (score, page 20)

This piece also hones in on the element of repetition in electronic music. This is a more complicated proposition than repetition in acoustic music; you can't actually repeat something as a performer, as slight variation will always exist and always keep any repetition tense with the feeling of change. But repetition *can* be literally reiterative in electronic music, leading to completely different implications for the material. However, this serves the conceptual material well, as repetition in the piece's electronic music components is focused on glitch and timescale variance — elements that are very present in this current cultural nostalgia for late-90s and early 2000s

technology. These elements create their own relationship of rooting and uprooting throughout the piece, working both in tandem with the piece's larger structure and in contrasting timescales. For example, the percussionist's opening material, which is heavily reiterative in the acoustic structure (mm. 2, cue 2 in the score), live-triggers different glitch samples drawn from the data sonification, creating a relationship of multiple recursive timescales occurring simultaneously. This element continues in sections such as the third main section of the piece (marked at mm. 179, cue 37) which finds electronic samples triggered at different speeds in contrast to the performers' material, which is repeated verbatim at the beginning of each reiteration, creating shifting timescales within repetitions.



Reiterative material and timescale variance (cues 39 [mm. 218] and 40 [mm. 230])

Since this piece's performance, I've reevaluated its message and methods of dissemination in conversation with a number of other composers and artists. I am not convinced that the piece needs to be performed exclusively with video, and this depends on the audience — American audiences have shown a preference for the video's presence, while European audiences have shown a preference towards removing it altogether. However, I think it's important to note this mainly because their reasons for this opinion have revolved around its power as a placemaking piece of art: For some, the presence of the video helps them reconnect with the virtual place, while for others its presence as an audio-only work allows for a more open interpretation of the place — perhaps more in line with the consideration of this previously-mentioned nostalgia for the open and free

possibility of technology in the late 1990s. I achieved a personal recreation of place with this performance, reconnected to a pivotal part of my experience and younger existence, but I also helped to create a place that reached others (at the very least, my collaborators). At the same time, we reimagined this existence within the growing context of modern technology: a constant push and pull between growing freedom and restriction, and opening boundaries of sound-making, bringing the past with us into the future.

Conclusion

I find it important to note that this research extends far beyond its place as inspiration for a master's thesis. I came to this work because of my passion for creating art related to place and my emotional connection to places. This work is inherently emotion-driven, and it will continue after the completion of this degree. Even as this piece of writing has grown and developed, I have continued with pieces focused on field recording, analysis, and repetitive structures (such as in the ensemble works *say all before* [2022], *initial gesture protraction* [2023], and *good day sunshine* [2023]) as well as expanding into other forms of interacting with place (such as with *metal on wind on metal*, a work for percussion and live-triggered electronics which will also be premiered in late April).

I acknowledge that there is much more to consider within this topic which cannot be fully explored within only two years of work. It's important to note that this research mostly avoids the question of *where* place is transported and how it is presented in performance spaces; this is especially of worth given my work in both the United States and Europe during the course of this research, and the presentation of the included works in both places. How should place be translated from country to country, region to region, or even room to room? Additionally, many of these works also heavily lean on techniques within multimedia and electronic music. This is not a weakness, but it is worth noting that I intend to continue to press the boundaries of this research as well within the development of purely acoustic works, looking for solutions beyond just utilizing analysis-to-notation techniques.

In the fall, I will begin a Ph.D. in Music and Multimedia Composition at Brown University in the United States. As part of this program, I will continue my research on developing "sonic

placemaking" as a synthesis of acoustic composition and multimedia and look to approach more of these aforementioned unanswered questions. From the standpoint of this multidisciplinary research degree, I intend to approach this with a narrower focus on artworks happening outside of fixed time (e.g. sound art and installation art) and performances existing in spaces outside those of the normative conservatory-or-university-centered experimental music community.

As much as I believe in this practice as a way to engage with my personal passion and create aesthetically interesting music, I firmly believe that placemaking in art has the potential to aid social change. Continually-oppressed members of our society, such as people of color and the LBGTQA+ community, are under assault today more than ever; I maintain that engaging with place as a concept and the act of creating place for and with others provides a blueprint in which we as artists can build safer and more inclusive spaces, as is our responsibility as artists to do. If anything comes from this research and its continuation, my main hope is that it brings me and my collaborators closer to succeeding in building these places with others.

Appendix

a. Primary reference portfolio

This section provides links, attributions, and acknowledgements for the four main pieces analyzed during the course of this paper.

Date not remembered (2021) access in research catalogue

Written in collaboration with, and premiered by, Sketch351. First performance: Royal Conservatory of The Hague, April 2022, with Inês Lopes, Ricardo Oliveira, Daniel Martins, Diederik Smulders, and Marina Manterola.

(almost always is nearly enough) (2022) access in research catalogue

Written for Ensemble Dal Niente. First performance: DePaul University, Chicago, IL, July 2022, with Constance Volk, Hanna Hurwitz, Ammie Brod, and Juan Horie. Revised for earspace; revised version premiered at the University of North Carolina, November 2022, with Ledah Finck, Lena Vidulich, Erin Murphy Snedecor, and Philip Snyder.

phantom islands, saltwater superstructures (2022) access in research catalogue

Written for the Yarn/Wire International Institute and Festival in collaboration with Laura Barger and Kathryn Sloat. First performance: DiMenna Center for Classical Music, New York City, NY, June 2022.

Untitled.exe (2022) access in research catalogue

Written for the KonStruct.23 project in collaboration with João Brito, João Borralho, Ludovica Ballerino, and Maria de la Calle. First performance: Korzo Theatre, The Hague, December 2022.

b. Additional works access in research catalogue

This section provides brief context for pieces which are mentioned only in passing, but do still have importance in the development of this research.

fractures with grain and the dust on the window-sill (2021)

This piece for piano trio is impactful on this research for multiple reasons; firstly, it serves as the first piece of mine which utilized an early version of my analysis-to-notation Max/MSP patch, and secondly it was workshopped and recorded with ensemble Longleash at the same time as my first major explorations with electromagnetic field recording at the Loretto Motherhouse in Nerinx, Kentucky. To date, it has not had a live performance and only exists as this recorded version (fantastically recorded and engineered by Chris Kincaid).

say all before (2022)

This piece for ensemble (flute, trombone, cello, piano, percussion) and transducers is another collaborative work with Netherlands-based ensemble Sketch351. In this case, the source material comes from recordings of shortwave radio transmissions recorded from February to September 2022, some of which were then turned into notation for the ensemble and played through transducers into different resonant objects. Utilizing a repetition-based structure, this piece is worth noting for our use of transducers in the piece; while *phantom islands, saltwater superstructures* featured recordings played directly onto the instruments being played, in *say all before* these recordings are transduced into different standalone resonant bodies, with the shortwave recordings essentially becoming members of the ensemble. *say all before* was performed twice in September 2022 in Porto, Portugal and The Hague, with a fantastic studio recording produced by Leonardo Santos and Luuk van Leeuwen.

initial gesture protraction (2023)

Written for the New European Ensemble, this piece is essentially a sequel to *(almost always is nearly enough)*, taking its name from another song by Tortoise and containing similar inspiration to the earlier piece. In this case, a case of mistaken spectral analysis resulted in the piece's material — a file was analyzed and converted to notation, but I simply collected a set of pitches from the analysis and subsequently forgot what file I had analyzed. When I returned to the material, it had lost its identity, leaving the piece to become a type of study on 'creating place' from something which had lost its relationship to place. This piece will receive its premiere as part of the Royal Conservatory's Spring Festival in late April 2023.

metal on wind on metal (2023)

Written for American percussionist Luke Helker, *metal on wind on metal* follows techniques explored in *Untitled.exe* in the interaction between performance and live manipulation of sound. In this case, field recordings of found metal objects (taken in The Hague) are in turn manipulated live by a player interacting with different metal objects, including found "junk metal," saw blades, and vibraphone. This piece will receive its premiere in late April 2023 in Lawrence, Kansas, followed by a repeat performance at the New Music Gathering in Portland, Oregon, in late June 2023.

good day sunshine (2023)

Developed with Hague-based ensemble Kali along with singer Kristia Michael, this work is based on a field recording I took in my hometown of St. Augustine, FL. Winter 2022 saw a significant cold snap in St. Augustine, resulting in a surprising die-off of a number of plants in the area — one which is already beginning to be ravaged by the impacts of climate change. The text is derived from

a National Oceanographic and Atmospheric Administration (NOAA) climate analysis from December 2022, when the source field recording was taken. *good day sunshine* will receive its premiere as part of the Royal Conservatory's Spring Festival in late April 2023.

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