Exploring the Compositional Possibilities of Decoupled Organ Pipes

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Dedication

This work is dedicated to my grandparents Reverend Julian Armfelt *BA*
and Mrs Barbara Armfelt *LRAM*

Acknowledgements

Abstract

My practice explores the extended sonic possibilities of a collection of organ pipes that have been decoupled from the instrument. As many unserviceable church and theatre organs are dismantled and sold as scrap materials, I demonstrate how organ pipes may be repurposed as handheld, mouth-blown instruments or components within sound-making devices that utilise fan-blown mechanisms, allowing participants to interact with pipes in new ways. Through a portfolio of warm-up tasks, studies, group activities and building instructions for interactive sound installations, I explore how textual and graphic notation may guide and encourage participants to individually and collectively investigate the performability of decoupled organ pipes.

Following an introduction to my research and methodological approach, including an overview of my research focuses and key works that relate to my compositional approach, a supporting commentary is provided for my portfolio. I demonstrate how textual and graphic notation can be used to create music-making sessions that are engaging, adaptable and accessible for all participants, regardless of performance experience, instrumental skills and understanding of musical terminology. The documentation provided evidences participants exploring a variety of activities and the accompanying survey responses indicate successful aspects of the music-making sessions and some areas that may require further consideration. The outcomes demonstrate that the collection of organ pipes is an exciting resource for informal music-making, where the ethos of this activity may be understood as exploring the performability of decoupled organ pipes through intuition and experimentation, without concern for a correct or proper approach to this process or working towards a more polished performance. By creating sessions that are informal, supportive and inclusive, I may invite more people to participate in activities, gathering a greater variety of interpretations to my instructional materials, and more thoroughly demonstrate how music-making activities, communicated through textual and graphic notation, can facilitate the instrumentalization of decoupled organ pipes.

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1. Commentary Introduction

My practice explores the extended sonic possibilities of a collection of organ pipes that have been decoupled from the instrument. Through a portfolio of music-making activities, I explore the following research question: How may activities be used to facilitate exploration of the performability of decoupled organ pipes? To address this question, I will explore how pipes may be used as handheld, mouthblown instruments and as components within fan-blown sound installations. The former will consider how participants may use hand movements, breath control and other techniques adapted from vocal and woodwind performance to create and manipulate sounds. When incorporating pipes within installations, fan-blown mechanisms will be used to sound pipes, allowing participants to interact with different regions of the pipes. In addition to allowing much larger pipes (150–250cm in length) to be sounded, as the volume of air that must be moved through each pipe is much greater, this approach allows participants to use other materials and objects to further manipulate sounds. Whether using pipes as handheld instruments or within installations, the activities explore individual and collective approaches to investigating sonic possibilities. The final sub-questions stemming from my primary focus are: How may textual and graphic notation be used to create instructional materials that are accessible for all participants, regardless of skill level and performance experience? How will groupwork be facilitated during activities to support and encourage participants as they explore the sonic possibilities of decoupled organ pipes?

Whether using pipes as handheld instruments or within installations, there are common aspects to the performance ethos that are important in supporting participants' freedom and experimentation. Instead of designing activities which require a strict, pre-determined and formal approach to performance, I create situations that afford experimentation with organ pipes within a relaxed and inclusive environment. The experimentation that happens throughout these music-making sessions is of greater focus than the result or "final performance"— participants should feel free to create, manipulate and share sounds with the group. John Stevens' approach in his music workshop handbook *Search & Reflect*

strives for a similar ethos, in which he stresses the importance that all his materials are accessible for mixed-ability groups and do 'not assume any previous music knowledge or training'.[1] As in *Search & Reflect*, I create activities that encourage participants to consider physical actions in their simplest forms. Instead of using specialised musical terms that necessitate additional learning and understanding, all actions and sounds are described in lay terms, allowing participants to process instructions more easily and focus on the task in hand. The only requirement of participants for a productive and rewarding session is that they approach activities with enthusiasm, open-mindedness and attention. In Stevens' words, '[we] celebrate mistakes because they highlight innocent human failings i.e.: lapses in mental concentration or in physical control'.[2] In taking part in these activities, participants should feel encouraged to investigate all sonic outcomes, without categorising some results as successful and others unsuccessful.

In Lee Higgins' discussion of how to achieve a successful music-making workshop, he argues that the structure of the session should remain 'porous and open' to counterbalance any guidance being given by the workshop facilitator.[3] For the process of experimentation to be authentic, it is crucial that activities allow for creative tangents, where participants may spend more time exploring one idea than another, and sufficient time for participants to try different approaches to the same task. To achieve this structural flexibility, while maintaining some control over the general direction and momentum of a session, it is essential to consider where greater detail may be added to instructional materials to keep participants focussed, without forcing their decision-making towards pre-determined outcomes. As Higgins warns, a workshop facilitator may accidentally create a situation where genuine experiences of experimentation and idea-sharing become difficult due to overly structured tasks.[4] To avoid this undesirable outcome, participants need to be

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[1] John Stevens, *Search and Reflect: Concepts and Pieces by John Stevens*, eds. by John Stevens, Julia Doyle and Ollie Crook, with foreword by Christopher Small (London: Community Music, 1985), p.1.

[2] *Ibid.,* p. 2.

[3] Lee Higgins, 'The creative music workshop: event, facilitation, gift', *International Journal of Music Education*, 26.4, 2008, 326-338 (p. 328); the concept of 'workshop facilitation' with be explored in greater detail in Section 7.

[4] *Ibid.*, p. 327.

provided with prompts to explore a variety of actions and sounds, rules that govern how they may relate to one another or move within the performance space, and challenges which they may attempt to overcome individually and collectively, while ensuring all these ideas and instructions have scope for participants to take control of the process.

2. Methodology

'Instrumentalization', a concept that is fundamental to my primary research question and that forms the basis for my music-making activities, is described in the following way by Keep:

> Instrumentalizing seeks to discover the performability, intrinsic sonic palette and possibilities for sonic manipulation of objects. […] The process of instrumentalizing can provide the resulting artistic content of an improvisation, and may also become the performance strategy.[5]

The act of discovering new performance techniques through improvisation relates to each participant's approach to the sounding object, score materials and performance context, and participants will each discover new sounds due to their unique perspectives. As Keep notes, the desire to explore an object's performability can inform a compositional approach and function as a strategy in each activity.[6] By allowing participants to freely investigate and experiment with organ pipes through different improvisatory exercises, groups may discover a greater range of outcomes. Additionally, by ensuring sessions are inclusive and accessible, more people may participate and share ideas, further broadening the outcomes. Keep argues that '[e]very performer offers a personal aesthetic with a related personal practical approach in their exploration of sound-making and the subsequent rationale for organising sound'.[7] It is this aspect that connects my practice to the

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[5] Andy Keep, 'Instrumentalizing: Approaches to Improvising with Sounding Objects in Experimental Music', in James Saunders, ed., *The Ashgate Research Companion to Experimental Music* (Aldershot: Ashgate, 2009), pp. 113–130 (p. 113).

[6] *Ibid.*

[7] *Ibid.,* p. 114.

idea of workshopping, as I must not only create activities which use instrumentalization as their basis, but carefully consider the role of the facilitator—whether this is a leader or participant within a session, or embodied within instructional materials—in order to properly support the sharing of ideas. The materials, whether they are textual or graphical, read by all participants or spoken to the group by a facilitator, should avoid overly dictating solutions to problems and, instead, allow participants to learn by doing. While previous experience in improvisatory performance may allow a participant to generate ideas for experimentation more quickly, any participant may be encouraged to intuitively pursue phenomena that they find interesting and use a trial-and-error approach to instrumentalization. Most importantly, the activities must provide different opportunities for participants to discover, manipulate and share sounds. The activities must allow each variable to be explored in isolation—e.g. all possible ways of using your hands to interact with different regions of the pipes; all possible ways of being attentive to actions and sounds being created around you, and how you may respond to them, etc.—so that participants are provided with simple ideas that warrant investigation, additional suggestions for further experimentation, and a performance space in which others are navigating the same instructions. Together, these factors allow participants to engage with tasks individually and collectively, share skills through listening and observing, and consult materials for further direction and support.

My decision to create a portfolio of more easily accessible activities was not made because of a disinterest in how highly skilled and specialised musicians would approach the materials, but rather to create performance contexts where participants with significantly different performance backgrounds may approach tasks together.[8] Similarly, I did not want my own perspective on ways of sounding the pipes to limit a group's collective exploration. As Jennie Gottschalk highlights in her discussion of key aspects of experimental music, a method for focussing the attention of audiences and players on the sounds and actions themselves, as

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[8] More information on my decision-making when narrowing the focus of this research is provided in Section 3.

opposed to the 'expressivity of the composer', is for the composer to attempt to remove their own subjectivity from a work.[9] This approach requires avoidance of a hierarchy between the composer and participants, where everyone approaches tasks together and shares responsibilities. As Keep highlights, it is this interest in a non-subjective compositional approach that led to the development of 'free' improvisation in the 1950s, as composers such as John Cage, Morton Feldman and Earle Brown shifted towards graphic and text-based notation and explored greater degrees of indeterminacy in their music.[10] Similarly, in order to explore more thoroughly the sonic possibilities of decoupled pipes, I chose to loosen my level of control within activities and, instead, create a variety of performance modes where participants may partake in genuine experimentation.

When deciding how much control I wanted over participants' actions and what my role would be within sessions, I was influenced by Christian Wolff's 1960s works, and in particular his *Prose Collection* (1968–71), in which Wolff shifted away from graphic notation to explore verbal, instruction-based scores, that focussed heavily on performer choice. When describing his reason for this change, Wolff stated he was 'trying to see how little [he could] indicate and yet come up with a piece that's clearly itself, one that still has a life of its own'.[11] In this way, I wanted my text instructions to function as prompts for improvisatory exploration of the pipes, without making specific outcomes explicit. In Philip Thomas' discussion of pianist David Tudor's approach to strict and open forms of notation, he suggests that it is the integration of performer choice that results in a music that feels 'investigative'.[12] As my aim is to create works that provide an opportunity to interact with a unique set of instruments or a new sound-making device, I want to maintain a sense of excitement and freedom for participants as they explore the materials without knowing the sonic outcomes beforehand. Like the function of Wolff's text instructions in *Prose Collection*, I wanted to provide participants with a

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[9] Jennie Gottschalk, *Experimental Music Since 1970* (London: Bloomsbury, 2016), p. 3.

[10] Keep, p. 115.

[11] Christian Wolff quoted in Michael Nyman, *Experimental Music: Cage and Beyond* (Cambridge: Cambridge University Press, 1999), p. 113.

[12] Philip Thomas, 'A Prescription for Action', in James Saunders, ed., *The Ashgate Research Companion to Experimental Music* (Aldershot: Ashgate, 2009), pp. 77–98 (p. 77).

framework for each exercise that contains sufficient detail with the aim to avoid confusion and disengagement, but not so much detail that actions feel like a projection of the score. As Nyman highlights, the only requirement of performers in *Prose Collection* is 'an inclination to play with sounds'.[13] My interest in creating engaging and accessible activities was also influenced by the ethos and musical output of The Scratch Orchestra, an ensemble that was active between 1969–74 and founded by composers Cornelius Cardew, Howard Skempton and Michael Parsons. In Michael Nyman's discussion of this ensemble, he highlights the ability of the score materials created by Cardew for the ensemble to support the development of each participant as an interpreter and improvisor of experimental music, where engaged participants are provided with an opportunity to develop their skills as composer-performers. By using instrumentalization as the basis for my activities, I can invite participants to explore a role as a composer-performer, where they have an opportunity to discover new sounds and techniques.

As Gottschalk suggests, the ongoing process of designing materials with which participants engage, assessing the outcomes and relating these to research focuses is an important aspect of composing experimental music.[14] In Gilmore's discussion of James Tenney's practice, he describes the composer's perspective on experimentalism in music in the following way:

> Tenney believed that "experimental" in music should mean more or less what it does in the sciences. The composer would write a certain piece, try certain things out, and judge if they worked, didn't work, or only partly worked. Then in the next piece, that experiment could be followed up: like a scientist, one could go further down the same line.[15]

Similarly, I view the instrumentalization of decoupled pipes as an ongoing experiment, where activities can provide a guide for participants to investigate the materials in new ways. In a continuing cycle, instructional materials and equipment

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[13] Michael Nyman, *Experimental Music: Cage and Beyond* (Cambridge: Cambridge University Press, 1999), p. 144.

[14] Gottschalk, p. 3.

[15] Bob Gilmore, 'Five Maps of the Experimental World', in Darla Crispin and Bob Gilmore, eds., *Artistic Experimentation in Music: An Anthology* (Leuven, Belgium: Leuven University Press, 2014), pp. 23–30 (p. 26).

are prepared before each session, actions, sounds and relationships are explored through the activities, and participants may reflect on and learn from the outcomes and choose to explore different approaches moving forward. My aim is to create a portfolio of activities that effectively supports and encourages participants as they apply this ongoing process to decoupled organ pipes.

3. Initial Inspiration

When pipe organs within churches and theatres are deemed beyond repair, the materials are often dismantled and sold (or given away) as scrap materials. For makers of organ pipes, it is often more cost-effective to create new pipes, instead of restoring old and damaged ones, and it is possible to find collections of pipes that are either free or for sale at a low price. I purchased my collection of over 100 principal rank and bourdon pipes (of lengths ranging from 7 inches to 9 feet) from an organ builder and tuner for approximately £300.00, and while some pipes were damaged, they were perfectly usable for the intentions of my research. When using pipes as handheld instruments or components within installations, minor scratches and dents to their metal alloy or wooden construction do not pose problems. Rather, the slightly misshapen condition of some pipes may lead to unexpected sonic outcomes, which causes the exploration of their performability to be more stimulating.

My interest in exploring the sonic possibilities of decoupled organ pipes stems from a survey I conducted of key developments in organ music during the twentieth and twenty-first centuries, which started with an analysis of an early essay by composer Arnold Schoenberg, titled *Die Zukunft der Orgel* (c.1906). In this text, Schoenberg provides two main reasons for why many of his contemporaries chose not to write for organ. First, 'that such an enormous/comprehensive instrument is used by only one musician, and therefore cannot be given complete expression.'[16] Second, 'that this instrument, that has such a large number of different sound-colours, nevertheless has very little differentiation between

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[16] Arnold Schönberg, *Sämtliche Werke: Orgel-/Klavierwerke 11/5* (Mainz: Schott, 1973), trans. by Emily Landale via personal communication (2016).

them.'[17] As Glenn Watkins notes, it appears from this essay that Schoenberg desired a way of utilising the organ's full potential by way of a new interface/console that would allow multiple performers to independently control the dynamic level of individual pipes.[18] Whether the composer was in fact envisioning a wholly new instrument, or a way in which the organ could be radically redesigned, it does provide an interesting critique of the limitations of the instrument in its original form, and poses a question to future composers of how to approach writing for the organ in new ways. After reading Schoenberg's essay, I too became interested in developing a compositional approach that would allow performers to thoroughly explore the sonic possibilities of individual organ pipes. However, my interest lies in repurposing pipes as handheld instruments or within sound-making devices, and by experimenting with a variety of performance techniques, air flow rate, different types of human and nonhuman blowing mechanisms and using external objects and materials in conjunction with pipes to further manipulate sounds. While I do not believe there is a strong connection between my use of decoupled pipes and the wide variety of music written for the organ since the early-twentieth century, my fascination with experimental approaches to organ-writing has undoubtedly led to my current practice.

My first experimentations with decoupled pipes occurred in 2015, when I received an opportunity to explore the performability of a dismantled organ within a deconsecrated Wesleyan chapel in Whitby (North Yorkshire). Before researching other composers' approaches to writing music for organ, decoupled organ pipes, deconstructed instruments or found objects, I approached this opportunity to work with a new resource by setting up microphones within the chapel and recording a vast library of sounds using pipes as handheld, mouthblown instruments. I aimed to explore the entire sonic palette of the pipes, including their full frequency, dynamic and timbral range, using combinations of breath and hand-based performance techniques to manipulate sounds. I found the rich variety of sonic outcomes very exciting and subsequently used the recordings to compose an acousmatic piece

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[17] *Ibid.*

[18] Glenn E. Watkins, 'Schoenberg and the Organ', *Perspectives of New Music*, 4.1 (1965), 119–135 (p. 119).

titled *An Introduction to the Organ Pipe Ensemble*.[19] My aim was to create an illusion of an ensemble performing with the collection of pipes, where the audience would be surrounded by the full array of possible sounds.

Within these early recording sessions, where I individually sought to organise sounds into groups based on distinct categories of performance techniques, I began to learn that the process of discovering, practising, and developing techniques with the pipes was exciting and challenging, and was made even more so when I attempted to take a specific technique and apply it to different types and sizes of pipes. The adaptation required was largely due to two main aspects: the significant changes in air flow required when changing between pipes of different lengths and girths, and the shape and size of the pipe mouth and end affecting my ability to cover these openings with my hands. I repeatedly attempted to produce sounds with similar sonic qualities (i.e. constant and changing dynamic levels, timbres and rhythmic patterns) using a variety of pipes in turn. Once I had established a distinct sound or sequence of sounds and was familiar with the actions required to reproduce it, the challenge of translating this idea to different pipes led me to further appreciate the relationship between my breath, hand movements and the resulting sounds. At this early stage of my investigation, I knew that this act of self-led discovery with a personal collection of pipes could be greatly engaging and rewarding, and I wanted this aspect of the process to be fundamental to my music.

Once I had a full collection of pipes at the University of Leeds, I started developing ideas based on self-led discovery that would inform my portfolio activities. The early group sessions I arranged with one or two friends were informal, often open-ended performances, where I asked each person to gather a collection of pipes and improvise sounds without further instruction. These sessions allowed me to develop some solutions to practical problems: for example, how to ensure the experience was hygienic (all pipes are fitted with mouth covers and players use only their personal collection of pipes) and which sizes of pipes could be

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[19] Audio recording available here: 'An Introduction to the Organ Pipe Ensemble', *Soundcloud*, (2019), <https://soundcloud.com/jacob-randell/an-introduction-to-the-organ-pipe-ensemble> [accessed 31 March 2022].

easily carried and used as handheld, mouth-blown instruments. They also allowed me to spectate other players' investigative processes with the pipes, as they attempted to find new sounds and test the boundaries of what they could create. At this stage, though the lack of instruction for players often resulted in long sessions that lacked structure overall, the experience of seeing first-hand players discovering techniques, exploring nuances that I had not considered during my individual investigations, and achieving this by using a combination of self-led experimentation and listening and watching other players' actions, was invaluable for my compositional process.

To narrow the focus of the research and ensure that ideas were explored thoroughly, opposed to attempting the investigate every possible use and setting for decoupled pipes, it was crucial to consider the areas I did and did not want to explore through my portfolio. To inform this decision, I used the ideas highlighted in my early experimentations, such as individual and group experimentation and improvisation, investigation through trial and error, and the developmental process players go through when exploring a new sounding object. I wanted the process of becoming familiar with the pipes, discovering and developing skills and sharing ideas with other players to be fundamental to the activities within my portfolio. Furthermore, I wanted to be able to invite as many people as possible to participate in the activities, to allow for more perspectives to be shared. It was important for the activities to be accessible and stimulating for all, regardless of their previous experiences. My approach to this challenge was to design activities and their instructions with non-expert players in mind, while ensuring activities have sufficient scope to allow more experienced players to challenge themselves and find new territory to explore.

I chose to focus on textual and graphic notation, avoiding any traditional musical terminology and symbology, using it as a tool for communicating ideas to players without requiring prior knowledge or learning. By describing sounds and actions in lay terms, all players can view the start of my music-making sessions as the start of their learning, without feeling like they must "catch-up" with more experienced players. As a response to this challenge of composing accessible activities that would be stimulating for all, I was led to the idea of structural

flexibility, within individual activities and across whole sessions. As the activities would be based on a developmental process for each player and, for groups playing together over multiple sessions, the idea of collective development, it would be beneficial if the activities could be initially explored in more manageable forms, with scope for increased complexity once players feel ready for new challenges. Rather than creating rigid and isolated pieces of music, designed to function purely on their own without significant adaptations, I wanted to create activities that could function as building blocks for further experimentation. Ideally, these activities, when explored in isolation, would allow players to develop skills at a comfortable pace and have scope for extended, more complex versions. Equally, when players become familiar with multiple activities, there should be ways of combining and sequencing the activities so that sessions can explore a range of difficulty. Before discussing how these ideas informed my later practice and portfolio, I will first provide an overview of compositions and installations that relate to my research.

4. Examples of Using/Reusing Decoupled Organ Pipes

In searching for others who have explored new ways of utilising the organ, repurposing decoupled pipes, building DIY versions of pipes and, importantly, ways of sharing these ideas with audiences and participants, I have been able to better appreciate how my practice relates to other pertinent works. A composition that influenced my early experimentation with the performability of decoupled pipes was Ansgar Beste's *Dialogues Tremblants* (2015–2018), a piece for prepared pipe organ with two performers, in which objects and materials are used to prepare regions of the instrument to allow the second performer (the 'assistant') to manipulate sounds while the first performer uses the main console.[20] The idea of using other materials to directly prepare pipes was fascinating—an approach similar to preparing a piano to manipulate the resonance of its strings—and I began to consider ways of using decoupled pipes in conjunction with other materials and

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[20] Ansgar Beste, 'Dialogues Tremblants (Trembling Dialogues) – Improvisation', *Ansgar Beste: Composer Researcher*, (2015), <http://www.ansgarbeste.com/musical-compositions/solo/dialogues-tremblants/> [accessed 31 March 2022].

mechanisms to create interactive devices. While *Dialogues Tremblants* instrumentalises the organ in its original form by allowing a second performer to use their hands and breath to interact with the instrument via external materials and objects attached to the pipes, my research will partly consider how pipes may be incorporated within installations to provide an opportunity to instrumentalize an unknown sound-making device.

Two contrasting works from the 1980s that incorporate decoupled pipes in significantly different ways are Leonard Solomon's *Leonard Solomon & The Bellowphone Show* (1983) and Yoshi Wada's *Off The Wall* (1985).[21] The former explores the incorporation of a single DIY organ pipe, constructed from various plumbing parts and used in conjunction with dog whistles, a bicycle horn and a wind instrument Solomon named the bellowphone. While Solomon's light-hearted one-hour show with this eclectic, one-man-band instrument often paired music with comedy, the instrument he created allowed him to utilise many analogue mechanisms simultaneously, including the innovative use of an organ pipe. While my approach considers repurposing a collection of genuine organ pipes, Solomon's unique approach to instrument building, which demonstrated how a self-built organ could be placed in a new performative context, is undoubtedly relevant to my research. In contrast, Wada's *Off The Wall* does explore how genuine pipes may be repurposed, as they, in conjunction with bagpipes, are sounded using blowing mechanisms and accompanied by various percussion. Unlike Solomon's more compact and transportable instrument, Wada's creation has a larger physical presence within the performance space. While pipes are mounted vertically and in rows, drawing a comparison to a traditional organ, the deconstructed layout of the materials across the floor is striking. Within the liner notes for *Off The Wall*, one reviewer notes "[i]t may be more accurate to think of Wada as a sculptor than as a composer, because his music seems to be a physical reality".[22] This perspective highlights the immediate visual impact of Wada's bespoke device, where there is a

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[21] 'About: Len and the show', *Leonard Solomon & The Bellowphone Show*, (no date), <http://www.bellowphone.com/about.html> [accessed 31 March 2022]; 'Off The Wall by Yoshi Wada', *Bandcamp*, (2016), <https://yoshiwada.bandcamp.com/album/off-the-wall> [accessed 31 March 2022].

[22] 'Off The Wall by Yoshi Wada'.

connection to the grand impression pipe organs have within theatres and churches, while exploring a new, deconstructive approach to presenting pipes alongside different mechanisms.

Instrument-builder Bart Hopkin's *Sorry-Ass Organ* explores how a set of DIY organ pipes, constructed from PVC pipes and other plumbing materials, can be sounded using a non-keyboard interface. While Hopkin does not regard the project as wholly successful, he acknowledges the valuable learning experience afforded by the designing and building process.[23] As his primary aim was to avoid creating a keyboard interface, he began exploring mouth-blown mechanisms instead, allowing performers to have more control over the instrument's sonic outcomes by utilising breath control.[24] This creative decision allows for a new type of interaction between the performer and organ pipes, as they may experiment with under and over-blowing to achieve fluctuations in pitch and timbre. As Hopkin notes, while the instrument may have limitations, such as its inability to 'play with fluidity or legato', the performer is still provided with an opportunity to investigate a broad variety of sounds.[25] Any sounding object will have performative limitations, but it is these limitations that can encourage a participant to search for solutions or alternative approaches and discover new performance techniques and sounds. It is this idea that underpins my research interest in presenting new sound-making tools to participants, as each pipe or pipe-based installation will have its own idiosyncrasies that may be investigated.

Sarah Kenchington's *Wind Pipes for Edinburgh* (2013) involves a large collection of decommissioned organ pipes being used as components within a sound installation that requires at least six participants to interact with different regions of the device simultaneously.[26] As human interaction with the installation is necessary at all times for it to function, it creates a stimulating performance environment for participants where they have an individual and collective

[23] "Sorry-Ass Organ", *Bart Hopkin: Musician & Instrument Builder*, (no date), <http://barthopkin.com/sorry-ass-organ/> [accessed 31 March 2022].

[24] *Ibid.*

[25] *Ibid.*

[26] Suzy Glass, 'Wind Pipes', *Glass*, (2013), <https://www.suzyglass.co.uk/portfolio/wind-pipes/> [accessed 31 March 2022].

responsibility to perform actions. Furthermore, as Glass highlights, 'Kenchington relishes the unpredictable nature of her instruments', inviting participants into the investigative process of discovering their sonic possibilities.[27] As the inventor of the installation, Kenchington's creative control starts and ends during the designing and construction phases, but is relinquished as the device is handed over to a group of participants. As they investigate the device, participants are aided by colour-coding and other markers on the pipes, which act as a basic guide for which pipes will sound consonant or dissonant with one another.[28] In Kate Molleson's review, she suggests this clear visual representation of how the pipes have been organised creates an activity that is easy to understand and allows any group of participants to choreograph their actions: 'A professional organist would be no better at playing it than a child, [Kenchington] says, and indeed the instrument seems to bring out the child in everyone who tries it.'[29] It is this desire to create performance environments that are accessible and highly stimulating that is shared in my research. However, while *Wind Pipes for Edinburgh* requires frequent interaction between a group of participants and the installation to maintain its sounds, I am interested in creating interactive installations where participants may temporarily explore passive roles, where they are able to step back from the device and observe the effects of their actions and development of the resulting sounds, and experiment with different numbers of participants and combinations of roles.

Tarek Atoui's *Organ Within* is an interactive sound installation that incorporates parts of a deconstructed organ, including the pipes and blowing mechanism, alongside a computer-controlled air-flow system and network of plastic tubing. Within Maude Haak-Frendscho's review of the installation, she notes Atoui's interest in building an instrument that provides an engaging experience for deaf listeners and players, as the acoustic phenomena it creates can be appreciated

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[27] *Ibid.*

[28] Video recording available here: "Wind Pipes for Edinburgh - Daniel Padden (full version)", *Vimeo*, (no date), <https://vimeo.com/73293662?embedded=true&source=video_title&owner=12810077> [accessed 31 March 2022].

[29] Kate Molleson, 'Sarah Kenchington's Wind Pipes for Edinburgh with Suzy Glass and the Edinburgh Art Festival', *PRS Foundation*, (no date), <https://prsfoundation.com/partnerships/professional-development/new-music-plus/new-music-plus-uk/reviews/sarah-kenchington-wind-pipes/> [accessed 31 March 2022].

through 'perceptual modes beyond hearing'.[30] However, in addition to this aspect
of the installation, Atoui's modular approach to the instrument's design, where the
main sections of the organ are spread out across the exhibition floor, provides a
clearer view for all attendees of how the mechanisms function and interrelate.
Christina Turczyn highlights the clarity of the instrument's de-contextualised layout,
allowing parts of the instrument that are ordinarily hidden to be more easily
understood.[31] *Organ Within* also allows players to automate changes to the blowing
mechanism to control air flow mid-performance, providing them with freedom to
interact with different regions of the instrument and focus on further manipulating
sounds. As Haak-Frendscho notes, it is often players interacting with different
modules of the instrument simultaneously that creates unexpected sounds, as the
combination of their actions leads to new possibilities for experimentation. It is this
aspect which I aim to explore further through my installations, where the role
assumed by each participant is designed to function individually and in combination
with others.

Christian Zehnder and Gregor Hilbe's *OLOID* explores how purpose-built
organ pipes may be mounted within a wooden frame so that performers can more
easily mouth-blow pipes. The position of each pipe is carefully chosen to allow
performers to quickly transition between an arrangement of six pipes, minimising
the distance they must move their mouth.[32] The process of using your lungs and
mouth to sound each pipe allows for control of pitch and timbre, as the performers
may explore a wide range of air flow rates to under and over-blow pipes. As
highlighted in *Oloid*'s liner notes, it is this natural response of the pipes to human
breathing and blowing that first interested Zehnder and Hilbe, as they sought to
explore how a performance using pipes could be analogous to the human voice.[33] It

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[30] Maude E. Haak-Frendscho, 'A Social Body: Tarek Atoui's Organ Within', *title*, (2019),
<http://www.title-magazine.com/2019/07/a-social-body-tarek-atouis-organ-within/> [accessed 31
March 2022].

[31] Christina Turczyn, 'Music: Organ Within: An Infinite Window', *arttimesjournal: the go to source for
creatives*, (2019), <https://arttimesjournal.com/music/july_29_2019_christina_turczyn/tarek_
atoui_organ_within.html> [accessed 31 March 2022].

[32] 'Oloid by Christian Zehnder & Gregor Hilbe', *Bandcamp*, (2013),
<https://christianzehnderandgregorhilbe.bandcamp.com/releases> [accessed 31 March 2022].

[33] *Ibid.*

is evident within the recordings of *Oloid* that significant practise of techniques and rehearsing of each section took place to form a highly polished performance. Both performers demonstrate a mastery of the newly designed instruments, where they can build upon their experience with the setup and continue to challenge their physical abilities. In contrast, my activities using mouth-blown pipes will explore how these music-making tools may be made accessible for all participants, allowing larger groups to work together as they investigate activities. While I will provide opportunities to develop skills and understanding, each section of my portfolio is designed to support and encourage participants starting without performance experience.

Duncan Chapman's music-making workshop *Build an Organ* provided children with an opportunity to experiment with decoupled organ pipes within a relaxed and supportive environment[34]. First, the children were each provided with a small pipe with which they could freely experiment and, with instruction for Chapman, learn how to sound in different ways. Once the children had become familiar with how pipes may be sounded through individual investigation, the group were invited to combine their pipes to form one network, routed to a large, inflated air within the space that could act as a makeshift blowing mechanism. The structure of this workshop effectively guides the participants as they learn about pipes, starting with the fundamentals and building towards a participant-lead creation that demonstrates how their actions can be combined. This process of allowing participants to develop their own understanding through investigation is particularly relevant to my activities, as I aim to structure my portfolio in a way that considers the learning process and allows for skills to be discovered and developed in a sensible and achievable order. By encouraging participants to first explore sounds and actions in their basic forms, before gradually combining techniques and, eventually, demonstrating and discussing them with others, you allow sufficient time for learning to take place.

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[34] "Build an Organ Free Family Saturday at Firstsite", *Colchester Moot Hall Organ*, (2015), <https://moothallorgan.co.uk/outreach/firstsite/build-an-organ-free-family-saturday/> [accessed 31 March 2022].

5. Other Relevant Works and Influences

There are several composers whose creative output has influenced and provided useful comparisons to my practice. Though these works do not explore alternative uses for organ pipes, or repurposing dismantled instruments in general, the compositional approaches they demonstrate do relate to my research.

The first notable example is James Saunders, whose series of works *things to do* (2014–20) was informative on my approach to writing instructions to build relationships between players. In *things to do,* Saunders explores how different categories of cues, such as specific sounds and actions, can be combined with performative constraints to shape how players interact.[35] In these activities, the relationships between players and how they may test the boundaries of these relationships is fundamental. In Gottschalk's discussion of *things to do*, she notes that '[e]very participant's decisions depend not only on navigating the written instructions, but also on what the other participants do.'[36] It is this aspect of *things to do* that particularly interested me, as I aimed to design instructions that guided players through a social situation where, due to the variety of performative constraints, they may explore different degrees of agency and modes of interaction. Many approaches to agency are demonstrated in *things to do*: *w*hether one person is controlling several others, two people are controlling one another, or several groups are working concurrently and independently, players can experiment with sounds and actions within a variety of passive and active roles. While my activities have a greater focus on individual and collective instrumentalization of a specific set of sounding objects, there is a similarity with Saunders' approach to gamifying the activities to improve participants' engagement by focusing on processes, rules, and group interaction.

Pauline Oliveros' music has been another source of inspiration in my research, as a similarity between her approach to creating social situations using relatively brief instructions can be drawn with my activities. In Andersen's

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[35] More information on *things to do* available here: James Saunders, 'things to do (2014–20)', *James Saunders*, <https://www.james-saunders.com/things-2> [accessed 6 October 2022].

[36] Gottschalk, p. 201.

discussion of Oliveros' series of *Sonic Meditations*, he suggests that the composer's 'immediate concern was not the manner in which the groups were interpreting her instructions, but rather whether they were actually collaborating.'[37] Although instructions in the *Sonic Meditations* can occasionally be ambiguous, one specific interpretation is no more or less interesting than any other: the focus has shifted to the process of collective experience and groupwork. Andersen suggests that it is this openness in the creative process, where participants can explore different approaches together, that can make Oliveros' pieces 'rewarding social experiences as well as musical ones.'[38] It is this ethos, established through instructional materials, that relates to my practice. While I design activities and instructions in a different way, using less ambiguity in the description of sounds and actions and outlining rules and relationships in a more affirmative manner, there is a similarity between the creative safe space established in Oliveros' works and the group ethos I aim to encourage, namely the accessibility, inclusivity, and flexibility of my activities.[39]

When considering the modularity of my activities and the "Activity Maps" within which they can be integrated, I must note the impact of Anthony Braxton's music on my practice. In Braxton's introduction to his *Catalogue of Works*, he states:

> All compositions in my music system can be executed at the same time/moment. That is, this material in its entirety can be performed together as one state of being-at the same time (in whole or in part-in any combination). […] Shorter works can also be positioned into larger works-into any section of a given "host" composition.[40]

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[37] Drake Andersen, 'Spaces for People: Technology, improvisation and social interaction in the music of Pauline Oliveros', *Organised Sound* (2022), 1–8 (p. 2), available via <https://doi.org/10.1017/S1355771822000073> [accessed 6 October 2022].

[38] *Ibid.*

[39] A pertinent example of an experience within one of Oliveros' sessions is included here: Ximena Alarcón and Ron Herrema. 'Pauline Oliveros: A Shared Resonance', *Organised Sound*, 22.1 (2017), 7–10 (p. 7).

[40] Anthony Braxton, *Composition notes* (U.S: Synthesis Music, 1988), p. 548.

With this introduction to his large musical output, he encourages those who wish to explore his music to experiment with many different modular arrangements, including integrating fragments of works within others, exploring sequential and concurrent arrangements of different works, with the decision-making left to the players of the music. This approach encourages an experimental and intuitive approach to modular structure, where players may freely arrange and rearrange Braxton's musical ideas. What Braxton goes on to outline in his introduction opens an enormous territory to explore, where players must not strive for '"correct" performances without spirit or risk.'[41] This combinatory approach to structure can provide a level of freedom and creativity for players that, once individual works have become familiar, allows for a wealth of new experimentation. Rather than leaving the modular aspect of my activities as open as in Braxton's works, I chose to design structural frameworks, referred to as "Activity Maps", that allow players to integrate activities within different visual arrangements, as a way of arranging multiple activities over time.[42]

When developing my organ pipe installations, similarities can be drawn with the compositional approach of Gordon Mumma, whose 'electronic music equipment [was] designed to be part of [his] process for composing.'[43] Mumma's incorporation of technology combines self-made sound-making devices with different social conditions, to allows players to collaboratively explore new sounds, actions and processes with each performance.[44] In Mumma's words, the '"end-product" is more than a package of electronic hardware: it is a musical performance for live audience.'[45] This idea is particular relevant to my practice, as I do not want to simply provide assembly instructions for my installations and allow the exploration of the device to be wholly at the discretion of participants, but rather also provide an accompanying set of performance notes that outline potential roles within a performance with the device. The different relationships that can be

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[41] *Ibid.,* p. 554–5.

[42] Further discussion on my "Activity Maps" is provided in Sections 8–9.

[43] Gordon Mumma, *Cybersonic Arts: Adventures in American New Music* (Champaign, IL: University of Illinois Press, 2015), p. 11.

[44] *Ibid.,* pp. 43–4.

[45] *Ibid.,* p.43.

explored between players and the device, once players have assumed these distinct roles, will enable a greater variety of performative outcomes and encourage players to consider different approaches to the activity (i.e. different numbers of players and combinations of roles). The design of the device is fundamental to the experimentation that can take place, but the social aspect of the installation, including the combination of individual and collective decision-making that is guided by the instructional materials, is equally important to the performance.

My approach to designing interactive sound installations was also influenced by pianist David Tudor's realisation of John Cage's *Variations II* (1961), which Tudor performed using an amplified piano. Multiple microphones of different types are used to capture the instrument and the sounds are amplified using loudspeakers within the room.[46] As noted by Pritchett, this setup, chosen by Tudor, created 'to some degree, an uncontrollable instrument.'[47] Tudor had made the relationship between player and instrument more chaotic, necessitating a different approach to interpreting Cage's score that relied more on actions, opposed to reliable sonic outcomes. Pritchett also notes how Tudor's interpretation, including his own form of notation that assisted him in realising Cage's score, had to be flexible, to accommodate for the instrument's unpredictable nature.[48] When designing my installations and accompanying roles for players, there are several aspects of Tudor's approach to *Variations II* with which I relate. I wish to amplify large bourdon organ pipes using close-miking and multiple loudspeakers within the room, to create a performance environment that is lively, stimulating and sonically diverse. Like Tudor's 'action-based approach', I create distinct roles for players that encourage them to explore a specific set of actions, through which they will be able to learn how interaction with different areas of the device affects resulting sounds.[49] As my installations not only explore a sound-making device that is

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[46] An overview of David Tutor's realisation of *Variations II* is available here: You Nakai, *Reminded by the Instruments: David Tudor's Music* (Oxford: Oxford University Press, 2021), pp. 108–17, available via <https://ebookcentral.proquest.com/lib/leeds/detail.action?docID=6498166> [accessed 6 October 2022].

[47] James Pritchett. 'David Tudor as Composer/Performer in Cage's *Variations II*', *Leonardo Music Journal*, 14 (2004), 11–16 (p. 14).

[48] *Ibid.,* pp. 15–6.

[49] *Ibid.,* p. 14.

sometimes unpredictable, prompting players to investigate using an action-based approach, there will also be an additional source of uncertainty due to the complex ways in which multiple players' actions interact. The variety of simultaneous actions that may be explored result in collective performance techniques, where actions may function in congruent and incongruent ways in the creation and manipulation of sounds. Furthermore, players have the freedom to discuss how their actions may combine, if they wish to choreograph certain movements and work collaboratively, or purposefully experiment with actions without considering other players, to experiment with how randomness may impact sonic outcomes.

6. *Pistons Bourdon, Imitation* and Portfolio Aims

Pistons Bourdon marked my first experiment with using decoupled pipes in conjunction with a fan-based blowing mechanism to form an interactive sound installation. This device allowed participants to explore the sonic possibilities of four bourdon organ pipes modified to allow their stoppers (a wooden block lined with a leather or cloth sheet that creates an airtight seal in one end of the pipe) to easily slide inside the pipes, thus allowing their pitches to be altered. The pipes were sounded using a hydroponic fan (ordinarily used for ventilation in greenhouses and grow rooms) which is routed to the pipes using a variety of ducting hoses, Y-splits and adapters, and can be operated by participants using an on/off switch. The sound of each pipe was amplified by close-miking above each pipe mouth and diffusing the sound across two loudspeakers, as this allowed more subtle sounds to be heard over the blowing mechanism. Each participant assumed one of four roles that dictated the region of the device with which they interacted and used a set of role-specific text instructions as prompts for action.[50] *Pistons Bourdon* was my first composition for decoupled organ pipes and participants and was an invaluable experience that informed the creative decisions behind my subsequent activities. It serves as a useful starting point in this discussion, highlighting aspects of my compositional approach which warranted further

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[50] See Documentation for video recordings of three versions of *Pistons Bourdon*: *Pistons Bourdon (LSTwo performance)*, *Pistons Bourdon ('The Visitation' version)* and *Pistons Bourdon (alternative setup for one pipe and two players)*.

development to guide participants more effectively as they explore an unknown sounding object.

When creating *Pistons Bourdon,* I did not view it as a standalone installation to be setup within an exhibition space without further guidance for viewers/participants, but rather an installation *with* instructional materials that encouraged participants to experience the device sonically, visually and haptically. As Ros Bandt highlights in her discussion of the multi-sensory nature of sound installations, any device or object that is the focus of an installation draws the aural *and* visual attention of participants and passive viewers, inhabiting the exhibition space.[51] The temporality of sound installations is not necessarily linear, as participants may discover the performative capabilities of the device in different orders or through different means. Bandt characterises the sound installation as a 'hybrid artform, with many entrances and exits', and it is this aspect of their nature which relates to the process of instrumentalizing an unknown object or device.[52] Participants of sound installations must use their senses creatively to explore the performability of the device and are free to work individually and collectively as they experiment. With *Pistons Bourdon*, my aim was to create a social experience where participants' appreciation of how their actions may affect sounds produced by the device and each other's actions increases as they explore their roles. As Ethan Rose notes, object-based sound installations may explore various degrees of participant control and understanding: devices may be designed to function in ways that cause unpredictable sonic outcomes, or may provide participants with interfaces that are challenging to understand and control.[53] In contrast, my aim was to create a performance experience that was more transparent, where participants could quickly build an appreciation for the consequences of their actions through using text instructions as guidance and interacting with the device and other participants. This compositional approach relates to the concept 'anti-illusionism', developed by conceptual artist Robert Morris and described by Monte as an artistic

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[51] Ros Bandt, 'Sound Installation: Blurring the boundaries of the Eye, the Ear, Space and Time', *Contemporary Music Review*, 25.4 (2006), 353–365 (p. 353).

[52] *Ibid.*, p. 354.

[53] Ethan Rose, 'Translating Transformations: Object-Based Sound Installations', *Leonardo*, 23.1 (2013), 65–69 (p. 65).

approach where all elements and procedures that form a work are displayed clearly to an audience, avoiding any sort of mysticism regarding the sound-making processes.[54] I aimed to create an engaging experience with a variety of performative outcomes, without causing participants to feel confused or hesitant when interacting with the device.

As outlined by Stevens, the fundamental aspects of an inclusive workshop are not to assume knowledge or training, to allow participants to learn through experimentation, as opposed to regular instruction, and to ensure that all participants understand that the process of exploring the exercise is more important than any outcomes.[55] Throughout the instructional materials for *Pistons Bourdon*, I ensured specialist terms and symbols relating to musical performance were not used, and that all instructions relating to equipment and assembly were clear and comprehensive. By encouraging participants to explore various forms of group interaction, participants develop an awareness of each other's actions, their potential to affect other's actions, and different ways to align or contrast their actions with others. As Stevens notes, it may be beneficial in some circumstances for participants to discuss aspects of the performance as a group, since not all nuances of the exercise may be easy to appreciate through nonverbal forms of communication used in performance.[56] For this reason, participants in *Pistons Bourdon* are informed that they are free to discuss any ideas as a group—as their familiarity with the device grows, they may feel more inclined to give instruction or encouragement to others. Gottschalk notes that experimental music can often explore processes for sound-making where prescribed actions result in varied consequences and, therefore, I aimed to create a performance environment where participants are encouraged to investigate the spontaneity and fallibility of the installation.[57] Individually, participants may discover unexpected outcomes and make note of the required actions, gradually forming a personal collection of sounds and actions. Collectively, participants may discuss and demonstrate these

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[54] James Monte, 'Anti-Illusion: Procedures/Materials', *Anti-Illusion: Procedures/Materials*, curated by James Monte and Marcia Tucker (New York: Whitney Museum of American Art, 1969).

[55] Stevens, p. 1–2.

[56] *Ibid.,* p. 3.

[57] Gottschalk, p. 14.

ideas, learn from each other and further increase their knowledge of ways of interacting with the device.

With *Pistons Bourdon*, I viewed the act of building and developing the installation as an integral part of the compositional process, as it relied on constant reassessment of the device's capabilities as an interactive tool. Before forming a clear idea of what my instructional materials would include, or how many participants would be able to interact with the device, I focussed entirely on creating an installation that I found stimulating to investigate. By making a new instrument with which I was unfamiliar, I created the necessity for sonic exploration before any score materials had been formed. In Gottschalk's discussion of composer David Behrman's music, she highlights his perspective on the process of instrument building—whether building new instruments from found objects and materials or modifying pre-existing instruments—as being equally important in the compositional process as any other activity.[58] Hugh Davies, who pioneered a DIY approach to instrument building from the 1960s onward, often started his compositional process by using everyday objects to build sound-making devices, using amplification to make audible the rich variety of sounds that would otherwise be unheard, and endeavoured to inspire others to experiment with instrument building.[59] This idea is particularly relevant to *Pistons Bourdon*, as the materials are altered and assembled in such a way that allows for sonic manipulation beyond their original purpose. Participants may investigate this new territory without an understanding of how organ pipes function within their original setting and, instead, conduct experiments with the aim of discovering phenomena they feel is interesting.

At the core of this investigation is the improvisation of the participants, as they are prompted by text instructions to explore their roles within the activity and how these interrelate. Prévost proposes that the process of improvisation within a compositional mode affords the 'application of "problem-solving" techniques "within" performance', and the development of 'dialogical interrelations between

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[58] *Ibid.*, p. 59.

[59] "For Hugh Davies", *Another Timbre*, (2008),
<http://www.anothertimbre.com/forhughdavies.html> [accessed 31 March 2022].

musicians'.[60] The improvisatory nature of participants' roles in *Pistons Bourdon* was developed as a method for encouraging participants to focus entirely on how they and others creatively investigate the installation. While the exact approach taken by participants is not crucial—it is inevitable that participants will interpret instructions and suggestions in different ways—the willingness of each participant to thoroughly explore actions afforded by their roles is essential. In Michael Pisaro's discussion of his *Harmony Series* works, he describes the function of his score materials as a simple method for structuring relationships between players, as opposed to prescribing specific actions that must be performed, and to create a performance environment where participants are individually monitoring the interrelation between each other through listening.[61] In *Pistons Bourdon*, the speed, frequency and timing of all actions is entirely at each participant's discretion, as they are at the heart of the investigation, and will, across the duration of the performance, develop a unique perspective on the function of their role and how it relates to others. In his discussion of *Harmony Series*, Greg Stuart highlights that, from each performer's perspective, the difference between the score materials and the realisation can seem 'impossibly large'—as Pisaro's instructions function to structure the relationships between performers, each ensemble will inevitably develop a unique and complex network of relationships that will allow them to explore tasks collectively.[62]

Reflecting on how participants interacted within realisations of *Pistons Bourdon* was highly beneficial when deciding aims for my subsequent activities and, particularly, what would become my final set of supporting instructions for building installations with bourdon organ pipes within *Making Music with Decoupled Organ Pipes* (*MMwDOP*). The device had proved to be an engaging music-making tool capable of producing a broad variety of sonic outcomes. Furthermore, the opportunities it provides for participants to explore different roles in isolation and

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[60] Edwin Prévost, *No Sound Is Innocent* (Harlow: Copula, 1995), pp. 171–2.

[61] Michael Pisaro, 'Only [Harmony Series #17]', *Only [Harmony Series #17]*, (2009), <http://harmonyseries.blogspot.com/> [accessed 31 March 2022].

[62] Greg Stuart, 'Michael Pisaro: harmony series 11 - 16', *Edition Wandelweiser*, (2007), <https://www.wandelweiser.de/_e-w-records/_ewr-catalogue/ewr0710.html> [accessed 31 March 2022].

alongside other roles effectively incorporates individual and collective decision-making. The aspect of *Pistons Bourdon* which warranted further development was the lack of guidance, provided through the text instructions, regarding how a group may structure their investigation of the object. While the descriptions of each role provided a useful introduction for participants to the different ways they may interact with the device, leaving the group to explore these roles without encouraging them to consider the structural organisation of their actions throughout the activity may have limited the outcomes. While some groups may take the initiative to self-organise a performance of *Pistons Bourdon* and create an action plan, it would be preferable for the text instructions to guide participants towards this idea. To address this issue, I aimed to include a framework within my portfolio that participants could apply to different types of activities and sessions, whether using the pipes as handheld instruments or within installations. This framework would allow any group to navigate the open form nature of the activities by creating a structural plan to control how many different scenarios are explored within a given timeframe.[63]

7. Facilitating Groupwork

In Higgins' discussion of creative workshop facilitation, he highlights a potential problem that may affect any workshop, where there appears to be a lack of genuine process within the experience for the facilitator and/or participants. He asks the following:

> [H]ow often do facilitators fool themselves and/or fool the participants that they are working within open creative structures? How often does one start creative musicmaking workshops but know full well what the musical outcome will be?[64]

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[63] A discussion of my compositional approach to open form activities within my portfolio is provided in Section 8.

[64] Lee Higgins, 'The creative music workshop: event, facilitation, gift', *International Journal of Music Education*, 26.4, 2008, 326–38 (p. 327).

When employing groupwork, it is vital to question whether it is authentic. When bringing together participants and encouraging the development and sharing of ideas, we must consider whether the instructional materials effectively support the creative process or overly guide participants towards predetermined outcomes. As Higgins notes, while facilitators often strive for 'unconditional openness' from participants within a workshop space, this is never possible, due to limiting factors such as available resources, time and skills.[65] The following discussion will highlight problems that may occur for a composer-facilitator when integrating workshops within their practice. While I argue there any many advantages to the unique types of groupwork and discussion that are possible within workshops, a composer-facilitator must be aware of potential problems when planning and facilitating sessions, to ensure that all activities may be adapted accordingly.

Workshopping can allow for types of groupwork and discussion that cannot easily be achieved through more strict forms of rehearsing and performing. In his discussion of the advantages of groupwork, Jarleth Benson suggests it may be beneficial to include participants within the creative process, allowing them to share skills and ideas and ensuring that they understand that their contributions are welcome, useful and respected.[66] I would add that groupwork allows participants to feel that they are part of individual and collective decision-making and play an integral role in finding solutions to problems. Benson notes that, by encouraging participation in the creative process, participants can develop coping strategies that are more effective when attempting to overcome challenges.[67] This aspect of workshopping presents an opportunity for participants to personally develop ideas and impact the direction of activities. Brown describes groupwork as 'a method of social work [that] is concerned with coping'.**[68]** In this way, groupwork can allow participants to help each other—a group is able to develop problem-solving skills as they develop a network of relationships between all members and establish an environment that supports this process. Creating this supportive environment can,

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[65] *Ibid.*, p. 328.

[66] Jarleth Benson, *Working More Creatively with Groups* (London: Tavistock, 1987), p. 1.

[67] *Ibid.*, p. 8.

[68] Allan Brown, *Groupwork* (Aldershot: Ashgate, 1992), p. 8.

however, lead to potential problems when workshopping. Hogan notes that, when attempting to ensure the workshop space is supportive, it is inevitable that participants will display a range of abilities and respond differently to stimuli.[69] Similar to a schoolteacher's ongoing challenge to engage and stimulate every child within a classroom, it is impossible to achieve a perfect balance. However, it is essential that activities are designed so that as many participants as possible have a positive experience. By providing an opportunity to partake in genuine problem solving, using intuition and improvisation within a non-judgemental environment, I believe participants are more likely to engage with activities and experience a greater variety of outcomes. Therefore, it is a composer-facilitator's responsibility to communicate clearly with participants that the workshop functions as a unified and respectful group, where unexpected or alternative outcomes are welcomed.

Planning a workshop may pose a peculiar problem for a facilitator. While we often want to create sessions that are open, flowing and adaptable, these sessions require careful planning. Activities must be meticulously designed and still allow for creative tangents and alternative approaches. When discussing the paradoxical nature of planning groupwork, Doel and Sawdon argue that 'only the well-organised groupworker knows just how much planning supports the spontaneity'.[70] Higgins suggests that it is a facilitator's responsibility to determine how much guidance is required to energise a group as they explore activities, without overly limiting participants' behaviour as the session progresses—he terms this approach 'Safety without Safety'.[71] Consideration of this idea is important for any composer of works with open forms or participant-control, as too much guidance may hinder group discussion and the development of ideas. Planning is an essential part of clarifying the purpose and aims of groupwork for the facilitator and participants. As it is important that participants feel that the workshop functions as a unified group, it is essential that aims for the groupwork are transparent for all involved. Benson highlights the importance of identifying specific outcomes and how these may be

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[69] Christine Hogan, *Understanding Facilitation: Theory and Principles* (London: Kogan Page, 2002), pp. 330–1.

[70] Mark Doel and Catherine Sawdon, *The Essential Groupworker: Teaching and Learning Creative Group Work* (London: Jessica Kingsley Publishers, 1999), p. 71.

[71] Higgins, p. 331.

achieved within the session, as this may help participants to identify challenges and develop coping strategies.[72] Furthermore, any responsibilities and expectations must be clarified, as this may help to reduce participants' anxieties as they approach activities.

In the introductory sections of Stevens' workshop handbook, the primary ethos of the project is made clear: the value of the activities is purely in the process of exploring them as a group and is not the result. To quote Stevens: '[his workshops] aim to pick out and magnify specific ingredients inherent in music making, while at the same time providing an environment where people feel free to listen, experiment, interact and make mistakes.'[73] Within this framework, participants are made aware that mistakes are welcome—they are to be expected—and do not disvalue the overall experience. Instead, participants are encouraged to experiment to an extent where mistakes are made, so that these moments may be discussed as a group and ideas can be developed. During a workshop, there are a variety of ways a facilitator may position themselves and behave. In my previous experiences, if I do not have a clear plan for how I will function as the facilitator, my role within activities can feel awkward, as there can be uncertainty about the amount and type of communication which should be provided. Benson's discussion of different leadership styles is useful when defining this role, as he not only highlights characteristics within directive or permissive styles—whether you are directly organizing and guiding a group or allowing a group to control itself—but also in 'facilitating' and 'flexible' roles.[74] A facilitating role may involve the facilitator assuming the role of a participant, yet with some level of expertise and ability to provide guidance without abdicating their authority. A flexible role may involve adapting the leadership style in response to any given scenario—the facilitator can therefore intuitively decide when and how to provide guidance.[75]

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[72] Benson, p. 13.
[73] Stevens, pp. 1–2.
[74] Benson, p. 40.
[75] *Ibid.*

Leadership may also be shared between the facilitator and participants. Brown suggests that, within groupwork, it may be advantageous for the facilitator to allow the role of leader to shift and allow participants to experience having greater control over the activity for a limited time.[76] This may reinforce the sense of unity and respect within the workshop, as it allows the facilitator to share the participants' perspective, and vice versa. An exercise within Pauline Oliveros' *Deep Listening Practice*, titled 'Listening Journal', provides an example of how control may be shifted effectively. Before participants are encouraged to find and document sounds that they feel are interesting, they are instructed to keep a listening journal, in which they may write about or draw sounds in any way they choose. This journal is private, and it is each participant's choice whether to share parts of it with others or not. To quote Oliveros: 'your journal is your sanctuary for your listening experiences.'[77] This is an effective way of providing participants with control over the activity, where any discussion is at their discretion. As the facilitator, Oliveros has provided sufficient guidance to energise the activity, yet allows participants to develop their own coping strategies.

Finally, it is essential for a facilitator to consider the age group of their participants when developing workshop materials. Within the scope of my research, I must consider how to support adult participants. Knowles highlights several key differences when facilitating adult learning within groupwork, including what he terms 'The learners need to know', described as adults requiring a *need* to learn: as they are no longer within school and may respond better to tasks once they are provided with reasons for why to participate.[78] In addition, 'The learner's self-concept' is described as adults' desire to self-direct their learning, rather than being taught.[79] It is important to consider these aspects of adult learning when developing materials and communicating with participants to ensure that the workshop environment is engaging and supportive.

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[76] Brown, p. 69.

[77] Pauline Oliveros, *Deep Listening: A Composer's Sound Practice* (New York: iUniverse, Inc., 2005), p. 17.

[78] Malcolm Knowles, Elwood Holton III and Richard Swanson, *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development* (Oxford: Elsevier, 2005), pp. 63–7.

[79] *Ibid.*, pp. 63–7.

8. Notation and Structure

My portfolio is structured to support participants' learning as they progress from encountering unknown sounding objects to discovering and developing a variety of performance techniques. The sequencing of activities has been carefully chosen to allow participants to learn techniques in a sensible order, where actions gradually progress from individual, simple movements to exploring more complex actions simultaneously. Within my earlier experiences working with participants to trial different approaches to textual notation, I was able to identify limitations in the effectivity of the instructional materials based on overall engagement and outcomes. An example of an earlier activity within my portfolio which provided a valuable learning experience was *Imitation*, within which I attempted to compact too many ideas within one multi-staged exercise. This activity attempted to guide participants too quickly through the process of gathering a personal collection of pipes, becoming familiar with them using free improvisation and immediately expecting participants to consider an wide-ranging list of general and role-specific questions relating to how they will behave individually and in relation to one another. As there was insufficient time to properly discover, practise and develop skills, participants often continued to repeat the actions they explored within the first half of the activity, as opposed to continually seeking new sounds and actions.[80] As Bryn Harrison notes, it is inevitable that composers must consider factors that are 'external' to their score materials, like participants' interpretation of their instructions and whether this will have the desired effect.[81] With *MMwDOP*, I wanted to create a singular document containing activities specifically designed to target each stage in participants' development, providing additional instruction for potentially challenging aspects of activities and reassurance of the groups' ethos throughout: to focus on and enjoy the process in hand, without concern for a correct or proper approach.

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[80] See Documentation for video recordings of two groups of participants performing *Imitation.*

[81] Eric Clarke, Nicholas Cook, Bryn Harrison and Philip Thomas, 'Interpretation and performance in Bryn Harrison's *être-temps*', *Musicae Scientiae*, 9.1 (2005), 31–74 (p. 34).

As many of my activities are based on participants learning how their personal collection of pipes responds to different actions and effort levels, encouraging sustained actions and gradual changes is a common feature within the warm-up tasks and studies. Not only does this allow participants to discover and practise techniques at a comfortable pace, but I would also argue that, during the early stages of participants' experimentation with sounds, additional time spent sounding pipes in this way more effectively immerses them within the sonic palette of decoupled organ pipes. In Richard Glover's discussion of the effects of sustained tones and durations, he suggests that these sounds may 'provide us with a unique landscape upon which expectancies, imaginations and temporalities can be flexible and entirely individual.'[82] Throughout my activities, there is a focus on sustaining and repeating actions until the resulting sounds become more familiar, allowing the participant to build an appreciation of their collection of pipes and, subsequently, endeavour to discover new outcomes. I would argue that, by not imposing limits on the duration of activities and allowing participants to self-manage their investigation of the pipes, they will feel more in control of their learning and adjust the duration of each activity according to their own needs and interests.

While my decision to utilise textual notation throughout much of the portfolio was due to a desire to avoid musical terminology and traditional notation, my studies presented a different challenge. As my studies function as an extension of the warm-up tasks, providing an opportunity for any participant with an interest in personally developing their performance techniques to progress beyond the actions covered within the warm-up tasks, I required a notational solution for more accurately controlling participants' actions over time. In his discussion of time-space notation, Harrison highlights its attractive ability to avoid 'symbolic time-notation' and, instead, allow a novice performer to simply scan across a graphical representation of sound from left to right, where the only expectation is that they appreciate how horizontal proportions indication relative durations.[83] For my

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[82] Richard Glover and Bryn Harrison, *Overcoming Form: reflections on immersive listening* (Huddersfield: University of Huddersfield Press, 2013), p. 7; Available here: <http://eprints.hud.ac.uk/18500/> [accessed 31 March 2022].

[83] *Ibid.*, p. 21.

studies, time-space notation effectively achieves a balance between accessibility for all participants and an increased level of control and detail in relation to how physical variables change over time. Whereas musical terms and symbols may act as a barrier to learning for novice participants, the abstract graphical nature of time-space notation avoids this issue, once the relationship between physical variables and the horizontal and vertical axes have been properly communicated.

Following my experimentations with textual notation in *Pistons Bourdon* and *Imitation*, I became interested in how a modular approach to structure may provide an answer to the following question: how may I use score materials to energise participants in their exploration of multiple activities over longer sessions? As each activity provides a task or challenge for participants to explore freely and indefinitely, an accessible framework that a group may use to implement different levels of structural control across activities could provide sessions with creative momentum. In Earle Brown's discussion of why he felt it was necessary to investigate 'mobility' and 'open-form' within his notation, he suggests it is connected to 'the search for inherent or "process" mobility in the work. The work as an endlessly transforming and generating "organism"'.[84] I argue that this perspective is particularly relevant for process-based music. Within my activities, a linear approach appears to be less important when intuitively exploring the performability of a sounding object: as participants may discover similar outcomes using different approaches, it is perhaps more effective to devise an open form that allows greater participant control. As my primary research question considers how I may effectively facilitate this process, I developed a structural framework titled "Activity Maps".

The activity maps provide a visually simplistic template that any group may use to combine activities from each section of the portfolio. As the maps become more complex, they allow for increased experimentation with how different activities may function simultaneously and provide participants with the challenge of quickly transitioning from one activity to another. As John Welsh notes, this

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[84] Earle Brown, 'The Notation and Performance of New Music', *The Musical Quarterly*, 72.2 (1986), 180–201, p. 199.

notational approach invites participants to explore creative roles, where they may make decisions in real-time that impact the direction and outcomes of sessions.[85] Furthermore, as Hamilton suggests in his discussion of how composers have utilised improvisation and imperfection, welcoming participants to take responsibility for aspects of sessions on a micro-scale (decision-making within individual activities) and macro-scale (collective decision-making when forming activity maps) may further improve engagement within sessions.[86] In Saunders' discussion of Matthias Spahlinger's *128 erfüllte augenblicke* (1975), he notes the use of "circuits", where players can follow cyclical paths within the score, indefinitely repeating sequences at their discretion.[87] The composer does not provide an indication of when sections of material may be exhausted during performance—instead, players are free to intuitively adjust durations on a micro-scale (instances and fragments) and macro-scale (sections and whole performances) based on their physical limitations and interests in the material. However, as Saunders notes, while Spahlinger chose an open, modular structure with a high degree of player-choice, his score materials do provide a diagram that players may use as a starting point for their own decision-making and consideration of the musical ideas provided.[88] Similarly, with my activity maps, I provide a variety of customisable modular structures, that can be populated with ideas from across *MMwDOP*, encouraging groups to consider how activities may function in different contexts and take responsibility for structuring performances. With this approach, I wanted to provide a framework that would invigorate a group and prompt further experimentation, without dictating specific pathways that should be explored.

9. Workshop Documentation and Feedback

In September 2022, I organised and documented a music-making session with 11 participants and facilitated the group as they explored the warm-up tasks and a

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[85] John P. Welsh, 'Open Form and Earle Brown's *Modules I* and *II* (1967)', *Perspectives of New Music*, 32.1 (1994), 254–90 (p. 255).

[86] Andy Hamilton, 'The Art of Improvisation and the Aesthetics of Imperfection', *British Journal of Aesthetics*, 40.1 (2000), 168–85 (p. 183).

[87] James Saunders, 'Modular Music', *Perspectives of New Music*, 46.1 (2008), 152–93 (p. 168).

[88] *Ibid.*

collection of main Activities from *MMwDOP*. Following the session, all participants completed an anonymous feedback survey, the responses of which are included as an appendix, that prompted participants to evaluate the session, including positive and negative aspects, and share whether they have previously attended similar music-making sessions. The responses to questions 1, 2 and 4 in the survey highlight a largely positive response to the activities across the group. Participants note that the materials and instructions were easily understood and well-suited to non-expert players. The responses suggest that the environment was relaxed and inclusive, with one participant noting that they felt a "lack of pressure". Multiple participants highlight the mixture of abilities in the room as being a positive aspect of the experience, as it provided an opportunity to learn from others, and that it was reassuring for players with less experience that others have a similar background. When advertising the opportunity to participate in the session, I purposefully invited people with a wide range of experience in musical performance, and this is reflected in responses to question 3. Multiple responses across the survey highlight positive aspects of the warm-up tasks, including them being an effective way for participants to familiarise themselves with their collection of pipes and feel free to experiment.

While the feedback suggests that most participants felt that the performance environment was relaxed and supportive, there are negative aspects highlighted in responses to question 5, 7, 9 and 11 that must be considered. Several participants would have appreciated more information regarding the session beforehand. These responses suggest that the main reason for this relates to participants wanting to feel more prepared ahead of the session—particularly for those who have less experience—as this may help them to feel more comfortable and reassured. To address this issue, prior to future sessions, participants could be provided with more information on the session overall and individual activities, and it would be at their discretion whether they wanted to engage with this information. One participant suggested that the session would have benefitted from more groupwork, which may be linked to the selection of main activities and time limitations of the session, rather than there being a lack of opportunities for groupwork across all activities in *MMwDOP*. Within a longer session, a group would

be able to explore a greater variety of activities, devote more time to each activity, and integrate activities within the "Activity Maps", encouraging more group discussion and decision-making.

Several participants noted that, for those with less experience and potentially increased anxiety, it can be difficult to produce new ideas for sounds and actions, and that this process can add pressure during activities. This observation may be linked to a lack of communication during the session to ensure participants understand that the actions and sounds introduced in the warm-up tasks provide a valuable source of ideas, ranging from simple to complex, that may be used across the main activities. However, it is positive that several participants enjoyed the process of learning new ideas from others, as this highlights the advantages of combining individual and collective learning and discussion. By establishing an informal and supportive environment, participants may feel more able to ask questions or voice concerns, as they trust that these ideas will be respected within the group. This is highlighted in responses to question 10, where participants note feeling able to ask questions, relax within the performance environment and feel reassured that there are others who may have similar questions or concerns.

10. Conclusion

Through a portfolio of music-making activities, I have explored how music-making activities, communicated through textual and graphic notation, may be used to facilitate exploration of the performability of decoupled organ pipes. The portfolio is designed to support and encourage novice participants as they discover, practise and develop performance techniques, to allow them to more thoroughly investigate sonic possibilities and share ideas with one another. The activities and accompanying guidance have been designed to maintain a performance ethos based on placing value in process and experimentation, as opposed to working towards a more polished performance, to reduce potential anxieties related to participation in social activities and establish a unified and relaxed creative environment. The design and sequencing of activities across the portfolio allows

participants to learn new skills in a sensible order, where actions are introduced in their simplest forms and gradually developed and combined with others. Whether acting individually or collectively, participants may experiment with each activity freely and indefinitely, challenging their physical abilities and seeking new outcomes. In addition to incorporating participant control within each activity, allowing for genuine investigation of phenomena, groups are invited to take collective responsibility for negotiating structural plans for sessions using activity maps.

The documentation and survey feedback indicated that the activities and accompanying instructions were easily understood, appropriate for participants with a range of performance experience, and allowed participants to explore different levels of difficulty at a manageable pace. Responses indicated that the warm-up tasks provide an effective way for players to familiarise themselves with a personal collection of pipes, learn a variety of performance techniques and relax within the session. Responses also highlighted the novelty of performing with unusual instruments, alongside players with different abilities, and that players may learn skills and ideas from one another. Participants were encouraged to ask questions, discuss ideas, including alternative approaches to activities, and experiment without concern for whether some outcomes are better or worse. Responses indicate that this group ethos was largely achieved, with participants noting the lack of pressure and their ability to engage in discussion and approach tasks individually and collectively. Future sessions may benefit from more information being sent to participants in advance, including the instructions for activities and a general overview of what to expect, as this may help some participants to feel more prepared and reduce potential anxiety. As the variety of ideas and types of groupwork explored across a session will always be dependent on the combination of activities, groups are encouraged through the instructional materials to explore different arrangements and approaches to activities to ensure sessions are varied and engaging.

The final version of my instructions for creating an interactive sound installation using large bourdon organ pipes demonstrates new compositional approaches to sounding decoupled pipes. Participants may create and manipulate

sounds from a variety of positions around the device, investigating how each role may affect the device's sounds and the actions of other players. By exploring different numbers of participants simultaneously interacting with the device or different combinations of roles, groups can discover a broad spectrum of sonic possibilities. Furthermore, as the building instructions are adaptable, groups may experiment with different numbers of pipes and approaches to spatialisation. Whether planning sessions that use pipes as handheld instruments or within installations, groups that become familiar with activities may use the activity maps to form structural plans, where they may control the pacing and complexity of a sequence of activities to search for new performative possibilities. The modular approach to structure provided by this framework allows groups to control the potential complexity and difficulty of a performance, and encourages them to consider how different structures, achieved using the activity maps, can affect the resulting performance.

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Appendix: Workshop Feedback

All 11 participants completed the workshop feedback survey and responses were recorded anonymously.

1. **Did you enjoy the workshop? (1 – not at all, 5 – very much)**

    1 – 0%   2 – 0%   3 – 0%   4 – 36.4%   5 – 63.6%

2. **Would you attend another workshop based around making music with organ pipes?**
    (1 – Never, 5 – Definitely)

    1 – 0%   2 – 0%   3 – 9.1%   4 – 36.4%   5 – 54.5%

3. **Have you participated in any workshops involving improvisation and/or experimental music before?**

    No – 81.8%   Yes – 18.2%

4. **What did you enjoy about the workshop?**

    Participant 1: "It was really relaxed and fun. The activities made it really easy to understand what was needed and great for beginners. You were able to pick up techniques and ideas from people more experienced with experimental music."

    Participant 2: "I really enjoyed the initial warm up exercises as a way to get us familiar with the pipes, and I really liked the chill, slightly informal vibes of the whole session - made for a very enjoyable and relaxing morning."

    Participant 3: "The creativity and flexibility. We could try things at our own pace and ask lots of questions. I felt more confident as it went on and started to enjoy coming up with different sounds."

    Participant 4: "Experimenting with instruments. I haven't done something like this before, so appreciated the opportunity. I didn't know what to expect before the workshop, but the activities were nice and relaxed."

    Participant 5: "Creativity. Something different."

    Participant 6: "Jake ran it very professionally and all of the instruments were well crafted. The activities were fun but also taught us how to use the instruments. I

enjoyed learning some new techniques and having enough time to properly practice them."

Participant 7: "It was something different."

Participant 8: "I loved how relaxed and fun the workshop was. The relaxed feel and lack of pressure allowed me to experiment a bit more with playing on the pipes making more interesting sounds. My favourite part was during the branch activity when a new sound was created and after 1 sequence solo the rest of the branch would join in, creating interesting dissonant chords following the same pattern."

Participant 9: "The incredibly interesting sonic results that were created as a result of a collaborative effort between people well versed in experimental music and those for which the workshop would have been a first-time experience!"

Participant 10: "I enjoyed getting to work with all the different people that came to the workshop. It was nice to get a mixture of ideas and experiences working together."

Participant 11: "It was nice to have freedom and experiment. I've never done anything like this and it was a great experience."

5. **What could be improved next time?**

Participant 1: "I would like the activities beforehand so they were more familiar Signalling or calling out the number of activity in the warm up would have kept people together. Not essential but some people didn't get through all activities as they got confused where we were up to."

Participant 2: "I think more frequent breaks would be good, I found myself getting quite worn out by the end."

Participant 3: "More group work, like a joint melody or harmony."

Participant 4: "Clearer instructions on activities - maybe more detail?"

Participant 5: "Variety of instruments. Would be fun to try playing the pipes with other instruments."

Participant 6: "Nothing"

Participant 7: "Not sure, thought it was great"

Participant 8: *Blank*

Participant 9: "I believe if we as a collective had known more about you, your PhD and your overall research endeavour, it may have set us up to create different,

maybe even more interesting results. Though, that said, I don't know whether or not the omission of this information was intentional, in order to create the results created. Otherwise, nothing, a fantastic experience all round."

Participant 10: "There could have been more ideas of sounds for people who were more nervous. Maybe little laminated cards with ideas of sounds and techniques."

Participant 11: "I didn't really know what I was getting in to so some information beforehand would have been nice. It was all explained very well when I arrived though."

6. **What was your favourite activity?**

   Warm-up   9.1%
   Moth   45.5%
   Anchor   18.2%
   Collect   9.1%
   Branch   18.2%

7. **What was your least favourite activity?**

   Warm-up   9.1%
   Moth   18.2%
   Anchor   18.2%
   Collect   18.2%
   Branch   36.4%

8. **Did any part of the workshop make you feel stressed or anxious?**

   Yes – 36.4%   No – 63.6%

9. **If you answered "yes" to question 8, please explain what made you feel this way. This may relate to feelings before or during the workshop. (If you answered "no" to question 8, please leave blank)**

   Participant 1: "A bit of pressure to come up with starting sounds and not keep using the same ones or others that you had heard already. More experienced musicians were more confident with this. Though this did get easier as the session went on."

   Participant 2: *Blank*

   Participant 3: "Not knowing what I was doing."

Participant 4: *Blank*

Participant 5: *Blank*

Participant 6: *Blank*

Participant 7: "The collect activity made me feel slightly anxious, especially when we had to perform it back."

Participant 8: *Blank*

Participant 9: *Blank*

Participant 10: "I didn't know what to expect but it was useful to have the warm-up exercise first to get used to the pipes on my own before having to work with other people. The tasks being explained first and people being able to ask questions to clarify things made me feel more comfortable and confident."

Participant 11: *Blank*

10. **If you feel any aspects of the workshop helped to reduce stress or anxiety, please provide details of these below.**

Participant 1: "You gave ideas of sounds and techniques and explained everything beforehand. Answered all our questions which helped. The workshop was set up as mini activities that were almost games. It was very relaxed and fun."

Participant 2: *Blank*

Participant 3: "By the end it was just fun and relaxing. It was great to just focus on sounds."

Participant 4: "It took my mind off everything outside the room."

Participant 5: "Being with others in a creative space was calming."

Participant 6: "Jake was a calming presence throughout and made it very clear we could sit out at any time."

Participant 7: *Blank*

Participant 8: *Blank*

Participant 9: "The warm-up section felt very inclusive and freeing. A great communal starter activity."

Participant 10: "Being able to ask questions. Other people who had come on their own. The pace of the activities was good so we could explore the task and settle, but also not too long where we struggled to keep coming up with ideas to keep it going."

Participant 11: "Clear explanations when I arrived and knowing that there were other people in the same position as me."

11. **If you have any other comments on the workshop, please note these below.**

Participant 1: "Moth - lots to think about. I kept getting confused about my volume and trying to keep the same technique. Collect - very fun. Nice to interact with more people. Branch - lots to do with the idea and more time could have been spent."

Participant 2: *Blank*

Participant 3: *Blank*

Participant 4: *Blank*

Participant 5: "It was great that everyone got a chance to try different roles during activities. I also appreciated that groups were given enough time to properly learn activities and try out different sounds."

Participant 6: "Good variety of activities! Would like to play around with combining some of them to make a longer performance. Would have loved a longer session to try all the main activities."

Participant 7: *Blank*

Participant 8: I thought the use of light in Moth was effective, as it added to the atmosphere. Maybe try adding similar ideas with lighting and props to other activities to make workshops more varied. Thanks for inviting me!
Participant 9: *Blank*

Participant 10: "It was nice to be able to choose groups but some could have also been chosen as you know who has more or less experience."

Participant 11: "I would have been willing for the workshop to run for longer as the activities were fun and it would have been great to explore more of them."